

PUBLIC SCHOOL PROGRAMS

- GOALS AND POLICIES
- PROGRAM & COURSE DESCRIPTIONS
- SERVICES, PROCEDURES & PUBLICATIONS

Public School Programs

1999–2000

Goals and Policies
Program and Course Descriptions
Services, Procedures, and Publications



Public School Programs: 1999-2000

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Prepared by the Department of Education

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Cataloguing-in-Publication Data

Main entry under title.

Public school programs, 1999-2000 : goals and policies;
program and course descriptions; services, procedures,
and, publications / Nova Scotia. Department of
Education.

Annual.

ISBN: 0-88871-567-6

1. Education -- Nova Scotia -- Curricula -- Periodicals.

2. Public education -- Nova Scotia.

I. Nova Scotia. Department of Education.

LB 1564 C3

375.001716--dc21 1999

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FOREWORD

This handbook is produced for school boards, school administrators, and teaching staffs. It presents the goals and policies of public school education in Nova Scotia, describes what students should know and be able to do (essential graduation learnings) if the goals are to be reached, and describes the programs and courses offered in the public school program. School boards, school administrators, and teaching staffs are to use the information provided in this handbook as the basis of their programs.

Programs and courses are elaborated beginning with Section E. Information on publications and resources is found in section U.

This handbook is also available on the Department of Education's Web site at www.EDnet.ns.ca/educ/d_depot/teaching/psp.htm

Public School Programs 2000-2001 will be available on the Department's Web site. After 1999, paper copies will no longer be automatically mailed to schools and other education partners. Individual paper copies may be requested from Nova Scotia Department of Education, English Program Services, PO Box 578, Halifax NS B3J 2S9.



THE GOALS OF PUBLIC EDUCATION



THE GOALS OF PUBLIC EDUCATION

The primary mandate of the public school system in Nova Scotia is to provide education programs and services for students to enable them to develop their potential and acquire the knowledge, skills, and attitudes needed to contribute to a healthy society and a prosperous and sustainable economy.

PREPARING ALL STUDENTS FOR A LIFETIME OF LEARNING

Fundamental changes are occurring in the world. The economy is becoming more diversified and is placing a greater emphasis on information-based enterprises, global competitiveness, and sustainable development. Society is becoming more diverse in family structure, language, culture, values, and perspectives. There is a growing awareness of global interdependence among peoples and nations. Nova Scotia's future is becoming more reliant upon partnerships and collaboration.

To function successfully in this changing environment, all children in Nova Scotia need a broad-based, quality education. Quality in education is demonstrated by the excellence of individual courses, programs, and shared experiences. Quality is also demonstrated by the diversity of educational experiences in which students are actively involved and by the extent to which individual student needs are met.

The challenge of education is to offer a school experience that will provide students with opportunities to develop the understanding, skills, and attitudes necessary to become lifelong learners capable of identifying and solving problems and dealing effectively with change. Students need well-developed organizational and interpersonal skills, which include working collaboratively with others and developing leadership skills. Students need to be able to communicate clearly, competently, and confidently from a broad knowledge base to make

thoughtful and responsible decisions. Achieving these educational goals will allow students to make connections between what they learn and how they live.

Fundamental to achieving these goals is the development of each student's self-esteem. Self-esteem is most effectively fostered by a learner-centred school environment that provides opportunities for all students to experience success from a variety of achievements. This success should enable learners to build confidence regarding their abilities and competencies and, more importantly, foster an image of themselves as persons of dignity and value who deserve respect. To this end, educational programs, services, and the teaching/learning environment must be sensitive to the culture and heritage of learners and must actively promote anti-racist principles.

Our vision of an educated person is that of a competent, confident learner able to think critically and participate fully in a democratic society and in a lifetime of meaningful work. A sound education provided in partnership with the home and the community forms the basis for students to become healthy and caring persons, having a respect for self and others and a desire to contribute to society as productive citizens.

A comprehensive education must offer a balanced program of studies that includes opportunities to explore the cultural, aesthetic, social, intellectual, physical, vocational, and moral aspects of society. All partners in education must work together to provide a stimulating and supportive environment to assist individuals in reaching their full potential.

Adapted from The Core Program and Related Services for Nova Scotia Schools (Department of Education, Halifax, 1992)

ESSENTIAL GRADUATION LEARNINGS

Public school education in Nova Scotia has two major goals: to help all students develop to their full potential cognitively, affectively, physically, and socially and to help all students acquire the knowledge, attitudes, and skills necessary for them to continue as thinking, learning, physically active, valued members of society.

The department believes that these goals can best be reached if school communities help students to develop in certain areas of learning called *essential graduation learnings*. These areas cross traditional subject boundaries and are not the monopoly of any one discipline. The Department of Education has identified six areas of learning:

- ▶ aesthetic expression
- ▶ citizenship
- ▶ communication
- ▶ personal development
- ▶ problem solving
- ▶ technological competence

The departments of education of Nova Scotia, New Brunswick, Prince Edward Island, and Newfoundland and Labrador, through the Atlantic Provinces Education Foundation (APEF), have developed statements describing what all students should know and be able to do in these areas of learning by the time they graduate. The essential graduation learnings are as follows:

Aesthetic Expression: *Graduates will be able to respond with critical awareness to various forms of the arts and be able to express themselves through the arts.*

They will, for example, be able to

- ▶ use various art forms as a means of formulating and expressing ideas, perceptions, and feelings
- ▶ demonstrate understanding of the contribution of the arts to daily life, cultural identity and diversity, and the economy

- ▶ demonstrate understanding of the ideas, perceptions, and feelings of others as expressed in various art forms
- ▶ demonstrate understanding of the significance of such cultural resources as theatres, museums, and galleries

Citizenship: *Graduates will be able to assess social, cultural, economic, and environmental interdependence in a local and global context.*

They will, for example, be able to

- ▶ demonstrate understanding of sustainable development and its implications for the environment
- ▶ demonstrate understanding of Canada's political, social, and economic systems in a global context
- ▶ explain the significance of the global economy on economic renewal and the development of society
- ▶ demonstrate understanding of the social, political, and economic forces that have shaped the past and present and apply that understanding in planning for the future
- ▶ examine human rights issues and recognize forms of discrimination
- ▶ determine the principles and actions of just, pluralistic, and democratic societies
- ▶ demonstrate understanding of their own and others' cultural heritage and cultural identity and of the contribution of multiculturalism to society

Communication: *Graduates will be able to use the listening, viewing, speaking, reading, and writing modes of language(s) and mathematical and scientific concepts and symbols to think, learn, and communicate effectively.*

They will, for example, be able to

- ▶ explore, reflect on, and express their own ideas, learnings, perceptions, and feelings
- ▶ demonstrate understanding of facts and relationships presented through words, numbers, symbols, graphs, and charts
- ▶ present information and instructions clearly, logically, concisely, and accurately for a variety of audiences

- ▶ demonstrate a knowledge of the second official language
- ▶ interpret, evaluate, and express data in everyday language
- ▶ access, process, evaluate, and share information
- ▶ critically reflect on and interpret ideas presented through a variety of media

Personal Development: *Graduates will be able to continue to learn and to pursue an active, healthy lifestyle.*

They will, for example, be able to

- ▶ demonstrate preparedness for the transition to work and further learning
- ▶ make appropriate decisions and take responsibility for those decisions
- ▶ work and study purposefully both independently and in groups
- ▶ demonstrate understanding of the relationship between health and lifestyle
- ▶ discriminate among a wide variety of career opportunities
- ▶ demonstrate coping, management, and interpersonal skills
- ▶ demonstrate intellectual curiosity, an entrepreneurial spirit, and initiative
- ▶ reflect critically on ethical issues

Problem Solving: *Graduates will be able to use the strategies and processes needed to solve a wide variety of problems, including those requiring language and mathematical and scientific concepts.*

They will, for example, be able to

- ▶ acquire, process, and interpret information critically to make informed decisions
- ▶ use a variety of strategies and perspectives with flexibility and creativity for solving problems
- ▶ formulate tentative ideas and question their own assumptions and those of others
- ▶ solve problems individually and collaboratively
- ▶ identify, describe, formulate, and reformulate problems

- ▶ evaluate ideas and examples and ask for explanations
- ▶ ask questions, observe relationships, make inferences, and draw conclusions
- ▶ identify, describe, and interpret different points of view and distinguish fact from opinion

Technological Competence: *Graduates will be able to use a variety of technologies, demonstrate an understanding of technological applications, and apply appropriate technologies for solving problems.*

They will, for example, be able to

- ▶ locate, evaluate, adapt, create, and share information using a variety of sources and technologies
- ▶ demonstrate understanding of, and use, existing and developing technologies
- ▶ demonstrate understanding of the impact of technology on society
- ▶ demonstrate understanding of ethical issues related to the use of technology in a local and global context

ESSENTIAL GRADUATION LEARNINGS AND THE SCHOOL PROGRAM

Providing opportunities for students to achieve the Essential Graduation Learnings is a shared responsibility within the whole school community—none of the six “learnings” is the monopoly of one subject or discipline alone, and none is to be developed in isolation from the others. For instance, enabling students to use language as a tool for learning is the responsibility of all teachers; activities in math or science classes centring on problem solving may develop both problem-solving skills and aesthetic expression.

Aesthetic Expression

Aesthetic expression begins with an aesthetic awareness or sensitivity that engages both

thoughts and feelings. That awareness involves a kind of knowing that goes beyond the acquisition of information. It has to do with knowing on a deeper level; with understanding the contexts of time, place, and community; and with internalizing human experiences and expression in a unique manner. For example, students in a social studies class may read a poem about an event or create a drama or dance to represent it, and thus deepen and enhance their understanding.

Aesthetic expression, then, has to do with response to experiences and involves the students directly. In responding or expressing aesthetically throughout the curriculum, students become aware of such qualities as rhythm, repetition, unity, symmetry, contrast, sequence, climax, balance, harmony, counterpoint, pace, and tone.

The arts, in particular, are concerned with deepening students' sensitivities and extending their aesthetic mode of knowing. Through direct engagement in the arts, whether it be in music, science, dance, math, visual arts, or language arts class, students learn about themselves and society and their potential for contributing to the interplay of ideas, emotions, and values that shape society.

For example, mathematical equations and theoretical proofs can evoke an aesthetic response for some. For students in science, an understanding of the resilience and fragility of nature and the interdependence and importance of all life forms may be an aesthetic experience. For others, movement experienced as a participant or as an observer has aesthetic meaning.

Opportunities to develop aesthetic awareness enable students to recognize the importance of aesthetic expressions in their daily lives (whether it be the music they listen to, the videos they view, the local art gallery they visit, the buildings around them, or their own poetic musings) as those expressions enrich and shape self and community, cultural identity, and diversity.

Citizenship

Citizenship education involves helping students develop the knowledge, skills, and attitudes that will enable them to have a sense of belonging and

to understand, actively participate in, and contribute positively to local, regional, national, and global communities.

To this end, all students engage in co-operative learning experiences that enable them to practise the democratic principles upon which their society is based. Through the study of Canada and its development, students develop an understanding of the foundations of their democratic society. Multiple learning opportunities inside and outside the classroom enable students to develop and demonstrate their understanding of the rights and responsibilities of Canadians, the rule of law and the ways changes to the law might be made, and the dynamics of the pluralistic and multicultural society in which they live.

Throughout the public school program, students will be assisted to become informed and responsible Canadian citizens who can think creatively and critically, make judgments in an informed way, solve problems and negotiate conflict, and actively participate in the democratic process.

Communication

Communication involves articulating and interpreting information, ideas, or emotions to learn, create, or inform. To communicate, we use not only written and spoken language, numbers, and symbols, but also images, gestures, movement, music, and other sounds.

In all disciplines, language serves two very important functions: it is an instrument for learning and a means of communicating. Through formulating tentative thoughts in language, we give order and meaning to information, experiences, and concepts and so come to understand them better. In all subject areas, small group talk and exploratory writing provide students with opportunities to use language for learning.

Research shows a close connection between a student's growth in language use and his/her growth in thinking ability. Even as they use language for communication, students make ideas clearer for themselves. Through language, we

make our thoughts known to others. To develop the ability to use language as an instrument for learning and communication, students need opportunities to talk and write in all subject areas for a variety of audiences and purposes. They also need to read and listen thoughtfully and sensitively.

Students calculate, estimate, measure, and use mathematics and science concepts in a wide range of disciplines. In making connections to language arts, social studies, and physical education, to name just three areas of study, students frequently interpret data found in everyday life, make judgments about their interpretations, and communicate their judgments and reasoning to others, usually using everyday language but also using the signs and symbols of mathematics.

All disciplines may provide opportunities for students to represent or clarify their ideas, knowledge, or emotions using images in, for example, drawings, photographs, or video. Students may also use movement, music, or other sounds in various combinations with language and images to give richness and complexity to their communication.

Personal Development

The public school program offers students opportunities to develop their intellectual potential and to develop attributes that promote individual, social, emotional, and physical well-being. The school program at all levels provides opportunities for fostering students' growth as collaborative and independent lifelong learners who can take responsibility for their own health and lifestyle.

The program also affords students opportunities to discover their particular interests and abilities. Each subject area engages students in reflecting on how they they learn as well as what they have learned, so that they might better know themselves as learners and build on their learning strengths. Many subject areas offer learners career education and opportunities to reflect on and integrate their personal, family, school, and community experiences to facilitate lifestyle and career choices.

All students need learning experiences that help them to understand themselves and to co-operate, negotiate, and build strong relationships with others. Experiences that help students develop entrepreneurial spirit and initiative, respond to opportunities to participate in their community, and be flexible in their outlook are important components of the public school program.

In addition, the learning environment and learning experiences must help students to acquire the knowledge, skills, and attitudes needed to lead healthy and active lives. A healthy, active lifestyle includes a commitment to lifelong learning and includes a commitment to positive lifestyle choices. Active, healthy living pursuits lead to an enriched use of leisure time and recognition of the importance and benefits of personal physical fitness.

The public school program provides opportunities for learners to discuss and express their own ideas and feelings, question and clarify their own values and beliefs, and examine ethical issues from critical perspectives. Students need learning experiences that enable them to gain an understanding of and commitment to the principles of fairness and equity. The public school program offers opportunities for students to focus on these issues so they may deal with others in a respectful way.

Problem Solving

In all subject areas, students demonstrate the important techniques of problem solving as they try to identify, describe, and reformulate problems from a variety of different perspectives; as they express their tentative ideas to others; as they explore, generate, and develop ideas; and as they listen and respond to the ideas of others, reflecting critically on the methods chosen and learning from mistakes as well as successes.

Students demonstrate the important techniques of problem solving as they show curiosity and open-mindedness, ask for explanations, make generalizations and supply specific evidence, question their own assumptions and those of others, read critically, and evaluate ideas and examples.

Technological Competence

In the public school program, technological competence involves an understanding of the interrelation of technology, society, and the environment and the ability to use technology to manage information.

All subjects help students to understand how technology shapes and is shaped by society and to become aware of the risks and benefits that result from technological development. Students also theorize about how technological problem-solving strategies can be used to take advantage of opportunities for innovation.

In all subjects, students write and manipulate their writing using word processing; in many subjects, students access and manage data in databases and spreadsheets and use information networks.

Students who face academic or physical challenges also explore technology as a facilitative tool.

SCHOOL PROGRAMS



SCHOOL PROGRAMS

PRINCIPLES OF LEARNING

The public school program is based on principles of learning that teachers and administrators should use as the basis of the experiences they plan for their students. These principles include the following:

Learning is a process of actively constructing knowledge.

Therefore, teachers and administrators have a responsibility to

- ▶ create environments and plan experiences that foster investigating, questioning, predicting, exploring, collecting, participating in educational play, and communicating
- ▶ engage learners in experiences that encourage their personal construction of knowledge, for example, hands-on, minds-on science and math; drama; creative movement; artistic representation; writing and talking to learn
- ▶ provide learners with experiences that actively involve them and are personally meaningful

Students construct knowledge and make it meaningful in terms of their prior knowledge and experiences.

Therefore, teachers and administrators have a responsibility to

- ▶ find out what students already know and can do
- ▶ create learning environments and plan experiences that build on learners' prior knowledge
- ▶ ensure that learners are able to see themselves reflected in the learning materials used in the school
- ▶ recognize, value, and use the great diversity of experiences and information students bring to school
- ▶ provide learning opportunities that respect and support students' racial, cultural, and social identities

- ▶ ensure that students are invited or challenged to build on prior knowledge, integrating new understandings with existing understandings

Learning is enhanced when it takes place in a social and collaborative environment.

Therefore, teachers and administrators have a responsibility to

- ▶ ensure that talk, group work, and collaborative ventures are central to class activities
- ▶ see that learners have frequent opportunities to learn from and with others
- ▶ structure opportunities for learners to engage in diverse social interactions with peers and adults
- ▶ help students to see themselves as members of a community of learners

Students need to continue to view learning as an integrated whole.

Therefore, teachers and administrators have a responsibility to

- ▶ plan opportunities to help students make connections across the curriculum and with the world outside and to structure activities that require students to reflect on those connections
- ▶ invite students to apply strategies from across the curriculum to solve problems in real situations

Learners must see themselves as capable and successful.

Therefore, teachers and administrators have a responsibility to

- ▶ provide activities, resources, and challenges that are developmentally appropriate to the learner
- ▶ communicate high expectations for achievement to all students
- ▶ encourage risk-taking in learning

- ▶ ensure that all students experience genuine success on a regular basis
- ▶ value experimentation and treat approximation as signs of growth
- ▶ provide frequent opportunities for students to reflect on and describe what they know and can do
- ▶ provide learning experiences and resources that reflect the diversity of the local and global community
- ▶ provide learning opportunities that develop self-esteem

Learners have different ways of knowing and representing knowledge.

Therefore, teachers and administrators have a responsibility to

- ▶ recognize each learner's preferred ways of constructing meaning and provide opportunities for exploring alternative ways
- ▶ plan a wide variety of open-ended experiences and assessment strategies
- ▶ recognize, acknowledge, and build on students' diverse ways of knowing and representing their knowledge
- ▶ structure frequent opportunities for students to use various art forms—music, drama, visual arts, dance, movement, crafts—as a means of exploring, formulating, and expressing ideas

Reflection is an integral part of learning.

Therefore, teachers and administrators have a responsibility to

- ▶ challenge their own beliefs and their practices based on continuous reflection
- ▶ reflect on their own learning processes and experiences
- ▶ encourage students to reflect on their learning processes and experiences
- ▶ encourage students to acknowledge and articulate their learnings
- ▶ help students use their reflections to understand themselves as learners, make connections with other learnings, and proceed with learning

THE LEARNING OUTCOMES FRAMEWORK

Through an ongoing process, the Department of Education is developing a learning outcomes framework for each area of the program. The learning outcomes framework consists of a series of curriculum outcomes statements describing what knowledge, skills, and attitudes students are expected to demonstrate as a result of their cumulative learning experiences in the primary-graduation continuum. General curriculum outcomes statements identify what students are expected to know, be able to do, and value upon completion of study in a curriculum area. General curriculum outcomes statements provide the organizational structure for other learning outcomes statements and reflect the "big ideas" in that subject area. Key-stage curriculum outcomes statements identify what students are expected to know and be able to do by the end of grades 3, 6, 9, and 12 as a result of their cumulative learning experiences in a curriculum area. Specific curriculum outcomes statements identify what students are expected to know and be able to do at the end of a particular grade level or a particular course. Curriculum outcomes for a subject area are described in a foundation document and in one or more curriculum guides. The foundation document articulates general curriculum outcomes and key-stage curriculum outcomes. The curriculum guides provide specific curriculum outcomes for each grade level and suggestions for instructional and assessment strategies.

Teachers and administrators are expected to refer to the outcomes framework to design learning environments and experiences that reflect the principles of learning and the needs and interests of the students.

Using the learning outcomes framework will help teachers design integrated learning experiences. Many of the curriculum outcomes of various subject areas overlap and may be achieved most effectively when subjects are integrated. The department encourages teachers to seek opportunities for interdisciplinary experiences whenever it is meaningful to do so. It is through

such experiences that students come to see how various areas of learning are interrelated. Administrators should provide leadership in establishing organizational and scheduling patterns for instruction that facilitate natural interrelating of subject areas.

PROGRAMMING FOR STUDENTS WITH SPECIAL NEEDS

Program Adaptations and Individual Program Plans (IPPs)

Program curricula must be adapted to meet the diverse needs and varying rates and patterns of learning of all students from elementary through senior high school.

The Special Education Policy Manual (1996) elaborates on program adaptation:

Teaching practice necessarily includes the use of a variety of teaching strategies to enable students to meet or to extend their learning beyond the designated outcomes. The manipulation of additional variables such as time, classroom organization, and evaluation techniques will also be necessary to meet individual student needs. Provided the designated outcomes are not substantially altered, these procedures do not require an individual program plan, although specific changes should be documented in the student's cumulative file, e.g., oral evaluation in place of written evaluation, curriculum compacting, etc.

When the manipulation of instructional variables is not sufficient to address student needs in the context of the prescribed curriculum, the program planning team is responsible for the development of an individual program plan. Program plans should be developed in the context of the broad curriculum outcomes for each core program. For students whose special needs include non-academic areas, the individual program plan should detail the outcomes involved and the supports and services needed to enable the student

to reach these outcomes. (See Special Education Policy Manual, 1996)

Administrators should make every reasonable effort to ensure that individual students who display outstanding academic, musical, artistic, linguistic, or physical abilities are given opportunities to develop these abilities. The needs of most gifted students can be met in the regular classroom; however, individual program planning may be necessary to enable students to extend learning beyond designated outcomes. (*Special Education Policy Manual*, policy 2.6, *Challenge for Excellence: Enrichment and Gifted Education Resource Guide*, 1999)

NOTE: IPPs approved by the school board are recognized as credit courses and count towards a High School Graduation Diploma.

Parental Involvement

Parents/guardians have a right to be involved in and informed about their children's educational programs. Parents/guardians have extensive knowledge of and experience with the special needs of their children. As the primary advocates for their children, they have an obligation to take an active role in sharing this knowledge with the school. Their involvement in program planning can be invaluable in meeting individual needs.

Each school is responsible for involving parents/guardians in and informing them of decisions regarding the assessments designed for their children. Written parental consent is required for any formal individual assessment carried out by employees of the board or persons/agencies to whom the student has been referred. (*Special Education Policy Manual*, policies 2.4, 2.5, and 3.1)

Funding

In addition to general formula funding, the Department of Education provides grants to each school board to assist with the costs of programming and services for students with special needs. The funds provided through the Special Education Grant must be used to

supplement the cost of providing programs and services to students requiring supports in addition to those a classroom teacher supplies. (See *Special Education Policy Manual*, policy 1.3.)

Students with Sensory Impairments

Under the Handicapped Persons Education Act (1975), the responsibility for identifying students with sensory impairments remains with the parents, who must notify the superintendent of schools. Superintendents should report to the regional education officer, as promptly as possible, the names of children who are in need of special instruction in public school because of a sensory impairment.

School board staff will arrange for an educational assessment of the student. The supervisor of student services will notify the Atlantic Provinces Special Education Authority (APSEA). For practical reasons, notification should go directly to the appropriate resource centre: the APSEA Resource Centre for the Visually Impaired or the APSEA Resource Centre for the Hearing Handicapped.

Supplementary Documents

Speech and Language Services: A Special Education Handbook (No. 38, 1983)
Special Education Policy Manual (1996)
Moving to Inclusion (1995) (Physical Education—should see authorized lists)
Handbook for the Transportation of Students with Special Needs (1996)
Challenge for Excellence: Enrichment and Gifted Education Resource Guide (1999)
Teacher Assistant Guidelines (1998)

ELEMENTARY YEARS: PRIMARY—GRADE 6

Compulsory and Elective Program Components

To ensure consistency in educational opportunities for all children of the province, elementary schools must include, for all children in each year's program, language arts (listening, talking, reading, viewing, writing, and other ways of representing), mathematics, visual arts, health, physical education, music, science, and social studies.

In Acadian and Francophone schools, English must be offered beginning at grade 3. In English schools, core French must be offered beginning at grade 4. School boards may request approval to offer immersion programs in the second official language of the students after consulting with the Department of Education.

Where offered, Gaelic as a second language and Mi'kmaq as a second language may be introduced at grade 3.

Guidelines for Time Allotment

Principals and teachers are responsible for ensuring that a reasonable and productive balance of time exists among all subject areas to enable students to achieve designated curriculum outcomes. Timetabling at the elementary level is necessary because many schools have specialist teachers who need to schedule times for students or classes. However, the classroom teacher must have a schedule flexible enough to allow him/her to seize natural learning opportunities.

The Learning Environment

With the principles of learning in mind, teachers and administrators must plan a supportive environment for their students, interacting with them and guiding, facilitating, directing, and extending their learning.

Features of this supportive learning environment include the following:

- ▶ a learning culture oriented to high expectations, academic achievement, and success for all students
- ▶ opportunities for all students to develop confidence and self-worth
- ▶ instructional contexts that reflect the principles of learning and the developmental nature of children's learning
- ▶ respect for racial, ethnic, social, and cultural diversity and sensitivity to differences in gender, ability, values, and lifestyles
- ▶ effective use of school space and appropriate use of time to accommodate a variety of learning situations, such as whole class discussions, small group work, learning centres, individual work, and construction and movement activities
- ▶ a safe and healthy environment
- ▶ access to information technology, art materials, science and mathematics tools and manipulatives, construction materials, and craft materials

Essential Learning Experiences

Because children are in many ways alike and in many ways different, schools must take the responsibility of providing varied learning experiences to meet the children's diverse needs and to allow for choices within a structured framework. Program decisions must reflect a knowledge of how children learn and how the characteristics of learners change with children's growth and development.

Throughout the early elementary years, structured or focussed play is an important way in which children learn. Such structured play supports, sustains, extends, enhances, and enriches the child's learning. Through play, children have valuable opportunities to interact with others in a variety of social settings and to use language meaningfully as they explore, plan, imagine, experiment, manipulate, dramatize, negotiate rules, and pose and solve problems.

In later elementary years, children are growing in their ability to deal with abstract concepts, to

generalize from their experiences, to learn from texts, and to work independently for longer periods of time. Play, the active engagement with events, ideas, materials, and other people, continues to provide important learning experiences but takes on new forms.

The following is a list of experiences considered essential to the elementary program. The forms of these experiences will vary as the children move through the elementary years, but the intent of each experience persists throughout.

On a daily basis, all students should

- ▶ explore, experiment, and make approximations
- ▶ make choices and reflect upon the decisions they make
- ▶ work in a variety of groups
- ▶ use many different communication modes, e.g., writing, drama, sculpture, dance, talk, and music
- ▶ learn through play and games
- ▶ manipulate a wide variety of materials across all subject areas
- ▶ reflect on and articulate what and how they have learned
- ▶ describe their efforts and accomplishments

The First Year in School

The first year of public school education guides children through the transition from home to school and provides a foundation for independent, lifelong learning. What and how children learn in their first year in school will have a major impact on successful learning experiences in school, on their personal development, and on their future participation in society. The primary program should

- ▶ nurture children as individuals with diverse needs and from diverse backgrounds
- ▶ extend children's preschool learning
- ▶ foster each child's intellectual, artistic, cultural, social, emotional, and physical development
- ▶ provide experiences and challenges with early literacy and early mathematics
- ▶ promote a positive attitude toward learning

- ensure a confident and successful start in school learning

Since each child has a unique rate of development and needs and abilities that are different from those of other children, the program must be developmentally appropriate for each child. Such developmentally appropriate learning activities and materials would involve children, for example, in using structured and self-initiated play to learn.

The primary program offers learners adequate opportunity for both unstructured and structured play. At play, children are often highly motivated: they concentrate, persevere, and make decisions. In an activity-centred environment, children play with each other and with a wide range of carefully selected materials. An effective program invites spontaneous, constructive, and imaginative play.

Children coming to their first year in school bring a rich variety of learning experiences. They have been learning in a number of environments: in their homes, in preschool programs, in day-care centres, and in community activities. Their early childhood years have been characterized by rapid and intense learning. These young children thrive on relevant, challenging experiences. By offering interrelated experiences, the primary program invites children to learn about themselves and about the physical and social world. The program invites children to explore ideas, relationships, and knowledge through language, the arts, technology, movement, and play.

The primary program must recognize and be responsive to each child's prior knowledge, skills, attitudes, learning pace, personal traits, interests, and preferred learning style. Learning activities must be flexible enough to be adapted to meet individual as well as group needs, interests, and developmental levels. It is crucial that the range of experiences in the primary program meet children's varying needs and provide both support and challenge for all learners.

Primary Registration and Preschool Orientation

The Department of Education recommends that all children entering school for the first time in the primary grade be part of a planned program of registration and preschool orientation in the school they will be attending.

The grade primary teachers, parents, and school administrators should all play major roles in this activity.

Registration

To enter school, children must be five years old on or before October 1. Proof of the child's age is required for registration. An update of health records may take place at this time. Parents will be expected to complete appropriate school district forms.

Orientation

The purpose of preschool orientation is to help the children begin the transition between the home and the school so they may develop confidence in their personal value and begin to acquire a positive attitude toward school. Preschool orientation for the children might include taking a tour of the school, meeting school personnel, and participating with the primary teacher and other children in exploratory activities, such as playing in an unstructured context, cutting, pasting, building with blocks and boxes, painting, playing with puppets, acting out roles, viewing picture books, telling stories, or listening to a story read by the teacher.

For the parents, preschool orientation should provide an opportunity to communicate with school personnel. Parents should be invited to inform teachers and administrators about their children, to express their hopes and concerns for future schooling, and to ask questions. Specific information on special learning or medical needs should be brought to the staff's attention.

Preschool orientation should be planned to cause the least disruption to the instruction of the current primary classes.

Screening should be limited to the physical assessment of such areas as vision and hearing. It should not include readiness testing or testing for levels of cognitive development—teachers will have continuous opportunities to gain a knowledge of the emotional, social, physical, and intellectual needs of each child by observing him/her daily in the classroom and schoolyard. They can then base their program planning on their daily observations.

JUNIOR HIGH/MIDDLE YEARS: GRADES 7-9

NOTE: All junior high students entering grade 9 for the first time in September 1999 will be required to take French as a second language. However, where offered, Mi'kmaq or Gaelic may fulfil the second language requirement.

Each school board is required to provide in grades 7 to 9 inclusive, in each school under its jurisdiction, instruction in the prescribed courses in English, French, personal development and relationships, science, mathematics, social studies, physical education, and **two** of technology education, family studies, or arts education.

Each school is also required to provide programming and services for students with special needs.

Compulsory and Elective Courses

Grade 7

The following subjects are compulsory:

French (or Mi'kmaq or Gaelic)
Language Arts
Mathematics
Science
Social Studies
Personal Development & Relationships
Physical Education

In addition, students will take at least one of these electives:

Art
Family Studies
Technology Education
Music

Grade 8

The following subjects are compulsory:

French (or Mi'kmaq or Gaelic)
Language Arts
Mathematics
Science
Social Studies
Personal Development & Relationships
Physical Education

In addition, students will take at least one of these electives:

Art
Family Studies
Technology Education
Music

Grade 9

The following subjects are compulsory:

French (or Mi'kmaq or Gaelic)
Language Arts
Mathematics
Science
Social Studies
Personal Development & Relationships
Physical Education

In addition, students will take at least one of these electives:

Art
Family Studies
Technology Education
Music

Exploratory Options

Exploratory options may be provided to extend the curriculum and provide enrichment opportunities for young adolescents.

Exploratory options should contribute to the students' achievement of specific curriculum outcomes in one or more subject areas and should reflect the developmental needs of the young adolescent.

Exploratories may be offered for short periods of time during the year, for example, two or three intersessions of six weeks at one hour per week for a total of six hours is common in many Nova Scotia schools.

The Learning Environment

The junior high school environment should be designed to support the unique physical, intellectual, emotional, and social changes that characterize adolescence. Teachers and administrators must plan a positive environment for all learners, one that supports adolescent growth and socialization.

Features of a supportive environment at the junior high level include

- ▶ transition planning to and from junior high
- ▶ a learning culture oriented to high expectations, academic achievement, and success for all students
- ▶ opportunities for all students to develop confidence and a sense of self-worth
- ▶ a climate where experimentation, initiative, and risk taking in learning are valued and errors are viewed as opportunities for learning and teaching
- ▶ effective use of school space and time to accommodate a variety of learning situations
- ▶ instructional contexts that reflect an understanding of adolescents' developmental growth, of differences and commonalities in that growth, and of students' diverse concerns, emotions, interests, values, and motivation
- ▶ collaborative and co-operative learning contexts that invite social interaction

- ▶ flexibility in classroom organization and methods of instruction and assessment to accommodate individual learning styles
- ▶ organizational structures to promote a sense of community
- ▶ respect for racial, ethnic, social, and cultural diversity and sensitivity to differences in gender, ability, values, and lifestyles
- ▶ recognition of and respect for adolescent cultures
- ▶ opportunities for students to integrate and interpret their society and cultures within the school environment
- ▶ a secure and healthy environment where students are safe from physical and psychological harassment
- ▶ an environment that upholds the rights of each student and requires students to respect the rights of others
- ▶ models of democratic approaches to problem solving
- ▶ support systems for students who are encountering difficulty

Essential Learning Experiences

Schools have a responsibility to provide a range of experiences to meet the diverse learning needs of junior high students. Program decisions must reflect a knowledge of

- ▶ the principles of learning
- ▶ curriculum outcomes
- ▶ ways to construct appropriate learning experiences that enable students to achieve those outcomes
- ▶ the diversity of adolescent developmental patterns
- ▶ the diversity of students' abilities, interests, and maturity
- ▶ the interaction among teaching styles, instructional strategies, and learning styles

The junior high program must provide opportunities for students to

- ▶ access a range of resources, including technology, as a tool for learning strong connections between the school and home and students

- ▶ develop and use strategies for organizing and planning their learning
- ▶ gain greater independence by taking increasing responsibility for their own learning
- ▶ engage in learning experiences that include both hands-on activities and more abstract ones
- ▶ become aware of and use opportunities for learning that exist outside the school
- ▶ enhance their understanding of how various areas of learning are interrelated
- ▶ engage in diverse interactions with adults and their peers in curriculum-based contexts that foster the development of interpersonal skills and social maturation

Students should have multiple opportunities to

- ▶ meet the expected learning outcomes
- ▶ explore rich and stimulating ideas
- ▶ engage their emotions, imaginations, and intellects
- ▶ engage actively in a variety of purposeful and meaningful learning experiences
- ▶ articulate their own learning needs
- ▶ work independently and use self-directed learning approaches
- ▶ learn with and from one another in a variety of groups
- ▶ use language across the curriculum to facilitate learning
- ▶ relate new learning to their prior knowledge and experiences
- ▶ make interdisciplinary connections
- ▶ make choices within a structured framework and reflect upon the appropriateness of those choices
- ▶ develop a work ethic and further understanding of career opportunities
- ▶ build self-esteem in meaningful ways
- ▶ explore multiple pathways to learning as they work toward achieving the expected learning outcomes
- ▶ reflect on what and how they have learned

Guidelines for Time Allotments

It is the school's responsibility to design schedules appropriate for all students. Principals are responsible for monitoring schedules to ensure an appropriate and productive balance of instructional time among the subject areas.

School schedules and time allotments for each course should allow for

- ▶ a focus on student learning and achievement of expected learning outcomes
- ▶ the learning needs of individual students
- ▶ opportunities for meaningful integration of curricula
- ▶ the particular needs of the school community

With its focus on the intended results of learning and the opportunity for all students to achieve expected outcomes, the learning outcomes framework for curriculum allows principals and teachers flexibility in allotting time for the effective delivery of the junior high program. In designing class timetables and teachers' schedules, principals and teachers might consider ways to

- ▶ ensure that the program provides opportunities for all students to achieve curriculum outcomes specific to each subject area
- ▶ facilitate integrated, interdisciplinary program organization based on the natural affinities among subject areas and the connections among the expected learning outcomes of junior high courses
- ▶ provide class periods of unequal time in a flexibly scheduled day, allowing students extended blocks of time to pursue learning opportunities and expand learning experiences
- ▶ provide additional time in courses when it is needed to enable students to achieve expected outcomes
- ▶ facilitate collaborative planning and co-ordination of instruction to meet students' needs and make optimal use of teacher expertise

During their time in junior high school, students should be helped to become increasingly independent users of learning resources to meet self-directed goals and needs.

The manipulation of instructional variables, such as time, classroom organization, teaching techniques, and assessment strategies, may be necessary to enable students to meet or extend their learning beyond the expected learning outcomes. When manipulating instructional

variables is not sufficient to address student needs in the context of the prescribed curriculum, an individual program plan (IPP) should be developed. An IPP may include any or all of the following:

- ▶ deletion of outcomes
- ▶ addition of new outcomes
- ▶ same general curriculum outcome but significantly different specific outcome level

For further information on program adaptation and IPPs, refer to "Programming for Students with Special Needs" above.

SENIOR HIGH YEARS: GRADES 10-12

A High School Graduation Diploma is awarded to students who have successfully completed the required subjects and electives as described below.

Each school should offer to all students patterns of courses appropriate to their individual needs. The counselling and teaching staffs should help each student select courses that meet the entry requirements of the post-secondary education or employment choice of the student and that help him/her develop broader personal interests and abilities.

Courses at the grade 10 level are designed to provide all learners with access to a strong foundation of common educational experiences. These courses engage students in a variety of groupings and interactions as contexts for learning, and offer a range of experiences which provide both challenge and support. To prepare students for a range of post-secondary destinations, grade 11 and grade 12 programs include course offerings that are increasingly specialized; as such, these grades are referred to as the specialization years.

Courses are identified by course title, grade level (10, 11, or 12); credit value (one credit or ½ credit); and credit type (academic, advanced, graduation, or open). A number of new courses

have a modular design: learning modules, each involving 25-30 hours of scheduled time, may be grouped as one or one-half credit. Students earn one credit for the successful completion of four learning modules and one-half credit for the successful completion of two related learning modules. Schools may wish to consider scheduling innovations that would facilitate the offering of learning modules as half-credits. In addition to Physically Active Lifestyles 11 and Career and Life Management 11, the following courses are available as half-credits: Life/Work Transitions 10, Design 11, Electrotechnologies 11, Oceans 11, and Tourism 11. Additional courses available as half-credits will be introduced in 2000-2001.

High School Credits

Definition of a Credit

A credit is awarded in recognition of the successful completion of an approved course that would normally be completed in a minimum of 110 hours of scheduled time.

In courses defined through curriculum outcomes statements, students are expected to have demonstrated achievement of the outcomes at an acceptable level of proficiency.

Credit Types

Each course is categorized as one of the following credit types:

Academic. Academic courses are designed for students who expect to enter college, university, or other post-secondary institutions.

Advanced. Advanced courses are designed to meet the needs of students who have demonstrated an exceptional degree of academic ability or achievement.

Graduation. Graduation courses are designed for students who wish to obtain a graduation diploma with a view to proceeding to employment or some selected area of post-secondary study.

Open. Although none of the open courses is designed to meet the specific entrance

requirements of any post-secondary institution, individual courses may meet entrance requirements of some institutions.

Credits for a Graduation Diploma

NOTE: Individual Program Plans (IPPs) approved by the school board for students with special needs and locally developed courses approved by the department are recognized as credit courses and count towards a High School Graduation Diploma.

Students who entered grade 10 for the first time in September 1997 and since are required to have a *minimum* of 18 credit courses to fulfil requirements for graduation. No more than 7 of the 18 credits may be first-year level (grade 10) courses, and at least 5 must be third-year level (grade 12) courses.

Although the minimum number of credits required for graduation is 18, it is highly recommended that schools develop schedules that allow students to complete 20, 21, or even 24 credits. Schedules should be designed to meet student needs, interests, and abilities.

For students who entered grade 10 for the first time since September 1997, the following credits are compulsory for graduation:

Language, Communication, and Expression

- ▶ 3 English language arts, one at each grade level, or for students in Acadian or Francophone schools, 3 French language arts, one at each grade level
- ▶ 1 fine arts: art, dance, drama, or music

Science, Mathematics, and Technology

- ▶ 2 mathematics
- ▶ 2 science: one from biology, chemistry, integrated science, or physics, and one other approved science course
- ▶ 2 others from mathematics, science, and/or technology: eligible technology courses include Computer-Related Studies, Data Processing, Design, Electrotechnologies, technology education, and Word/Information Processing

Personal Development and Society

- ▶ ½ credit Career and Life Management
- ▶ ½ credit Physically Active Lifestyles
- ▶ 1 global studies: Global Geography Or Global History
- ▶ 1 social studies: African Canadian Studies, economics, geography, history, or Mi'kmaq Studies

Within the 18 course requirements for a graduation diploma, in most cases, no student may receive credit for two courses in the same specific subject area at the same grade level. There are a few exceptions: these include co-op courses, Canadian Literature, Global Geography, Global History, and technology-related courses.

Prerequisites for Courses and Programs

Certain courses (such as mathematics or chemistry) normally require the successful completion of the previous year's course before the next year's work begins; however, prerequisites may sometimes be modified. For example, a school staff member, in consultation with the student and parents, may decide that a student who has not successfully completed a course is nevertheless capable of doing the following year's work. In such a situation, the student may enrol in the following year's course in that discipline. Credit, however, will not be given for the first course until it is successfully completed.

It is imperative that the school schedule accommodate students who need to take a first-year course or part of a first-year course while taking second-year courses. Similar provisions should be made for combinations of second- and third-year courses.

High school programming should be flexible enough

- ▶ for teachers or teams of teachers to integrate elements of the subject matter of two or more disciplines, provided each of the course elements receives a minimum of 110 hours of instructional time or students are given sufficient opportunity to achieve the prescribed outcomes

- for the lengths of units of learning within a particular credit program to be varied
- to meet students' learning needs and to accommodate worthwhile student-initiated activities.

The following table lists high school credit courses for 1999-2000 with their grade level and credit type.

HIGH SCHOOL CREDIT COURSES: 1999-2000

COURSES	GRADE LEVEL	CREDIT TYPE	GRADE LEVEL	CREDIT TYPE	GRADE LEVEL	CREDIT TYPE
Arts Education						
1. Art	10	acad	11	acad	12	acad
2. Canadian Music Studies	—	—	11	acad	—	—
3. Cultural Industries*	—	—	11	acad	—	—
4. Dance	—	—	11	acad	—	—
5. Drama	10	acad	11	acad	—	—
6. Music	10	acad	11	acad	12	acad
Business Education						
1. Accounting	—	—	11	open	12	open
2. Business Communications	—	—	—	—	12	grad
3. Business Mathematics	—	—	11	grad	—	—
4. Business Organization and Management	—	—	—	—	12	open
5. Business Personnel Development	—	—	—	—	12	open
6. Consumer Education	10	open	—	—	—	—
7. Data Processing	—	—	—	—	12	open
8. Keyboarding	10	open	11	open	12	open
9. Law	—	—	—	—	12	acad
10. Record Keeping	10	open	—	—	—	—
11. Shorthand	—	—	11	open	—	—
12. Shorthand Transcription	—	—	—	—	12	open
13. Word/Information Processing	—	—	—	—	12	open
14. Word/Information Technology	—	—	—	—	12	open
English Language Arts						
1. English	10	acad	11	acad	12	acad
2. English/Communications	—	—	11	grad	12	grad
3. Canadian Literature	—	—	—	—	12	acad
4. Technical Reading and Writing*	—	—	11	acad	—	—
Entrepreneurship						
1. Entrepreneurship	—	—	—	—	12	acad
Family Studies						
1. Canadian Families	—	—	—	—	12	open
2. Child Studies (½ credit)	10	open	—	—	—	—
3. Clothing and Textiles (½ credit)	10	open	—	—	12	open
4. Consumer Studies (½ credit)	10	open	—	—	—	—

COURSES	GRADE LEVEL	CREDIT TYPE	GRADE LEVEL	CREDIT TYPE	GRADE LEVEL	CREDIT TYPE
5. Child Studies	—	—	11	open	—	—
6. Food and Nutrition (½ credit)	10	open	—	—	12	open
7. Housing (½ credit)	—	—	—	—	12	open
French Second Language						
1. Core French	10	acad	11	acad	12	acad
2. Extended Core French	10	acad	11	acad	12	acad
3. Français—Immersion	10	acad	11	acad	12	acad
Gaelic						
1. Gaelic	10	acad	11	acad	12	acad
Mathematics						
1. Mathematics	10*	acad	11	acad	12	acad
2. Mathematics Foundations	10*	grad	11	grad	12	grad
3. Pre-calculus Mathematics	—	—	11	acad	12	acad
4. Advanced Mathematics	—	—	—	—	12	adv
Other Languages						
1. German	10	acad	11	acad	12	acad
2. Latin	10	acad	11	acad	12	acad
3. Spanish	10	acad	11	acad	12	acad
Personal Development and Career Education						
1. Career and Life Management (½ credit)	—	—	11	open	—	—
2. Life/Work Transitions*	10	open	—	—	—	—
2. Physically Active Lifestyles (½ credit)	—	—	11	open	—	—
3. Tourism	—	—	11	acad	—	—
Physical Education						
1. Physical Education	10	open	11	open	12	open
Sciences						
1. Biology	—	—	11	acad	12	acad
2. Advanced Biology	—	—	11	adv	12	adv
3. Chemistry	—	—	11	acad	12	acad
4. Advanced Chemistry	—	—	11	adv	12	adv
5. Canadian Geology	—	—	—	—	12	acad
6. Earth Science	—	—	—	—	12	grad
7. Integrated Science	10	acad	—	—	—	—

COURSES	GRADE LEVEL	CREDIT TYPE	GRADE LEVEL	CREDIT TYPE	GRADE LEVEL	CREDIT TYPE
8. Oceans	—	—	11	acad	—	—
9. Physics	—	—	11	acad	12	acad
10. Advanced Physics	—	—	11	adv	12	adv
Social Studies						
1. African Canadian Studies	—	—	11	acad	—	—
2. Economics	—	—	11	acad	12	acad
3. Geography	10	acad	11	acad	12	acad
4. Geography of Asia	10	acad	—	—	—	—
5. Geography of Canada	—	—	11	grad	—	—
6. Global Geography	—	—	—	—	12	acad
7. Global History	—	—	—	—	12	acad
8. History	10	acad	11	acad	12	acad
9. Twentieth-Century History	—	—	11	grad	—	—
10. Canadian History	—	—	—	—	12	grad
11. Law	—	—	—	—	12	acad
12. Mi'kmaq Studies	10	acad	—	—	—	—
13. Political Science	—	—	—	—	12	acad
14. Sociology	—	—	—	—	12	open
Technology-Related Education						
1. Communications Technology	—	—	11	open	12	open
2. Computer-Related Studies**	—	—	11	open	12	acad
3. Construction Technology	10	open	—	—	—	—
4. Energy, Power, and Transportation	—	—	11	open	—	—
5. Exploring Technology	10	open	—	—	—	—
6. Production Technology	—	—	11	open	12	open
7. Design*	—	—	11	acad	—	—
8. Electrotechnologies*	—	—	11	acad	—	—

* New course

** This course may not be offered after 1999-2000.

FRENCH FIRST LANGUAGE PROGRAMS

Acadian and French Language Services

The Acadian and French Language Services Branch is responsible for French first language programs and for French second language programs.

French First Language Division

The French First Language Division of the Acadian and French Language Services Branch is responsible for the development of French first language programs. These programs are designed to meet specific needs of students who are entitled to be schooled in their mother tongue, in accordance to Section 23 of the Canadian Charter of Rights and Freedoms.

French First Language programs are described in detail in *Programme des écoles publiques* the French version of *Public School Programs*.

FRENCH SECOND LANGUAGE PROGRAMS

The French Second Language Division of the Acadian and French Language Services Branch is responsible for the development of French second language programs. The aim of second language teaching is to develop the learner's ability to communicate effectively in French.

Nova Scotia offers four French second language programs:

- ▶ Core French (grades 4-12)
- ▶ Extended Core French (grades 7-12), following Core French grades 4-6
- ▶ Early French Immersion (primary-grade 12)
- ▶ Late French Immersion (grades 7-12), following Core French grades 4-6

core French, extended core French, and French Immersion programs are designed to accommodate all students.

French Second Language Programs are designed to enable all students to

- ▶ communicate effectively in French for a variety of purposes through a variety of ways and media
- ▶ demonstrate a better understanding of their own and others' cultural heritage and identity with particular emphasis on "French-speaking communities"
- ▶ demonstrate preparedness for further learning in French
- ▶ work, study, and solve problems both independently and in groups
- ▶ locate, evaluate, adapt, create, and share information using a variety of sources and technologies

To help students achieve these goals, all teaching in French second language programs should be in French.

Core French

In the core French program, French is studied and taught in regularly scheduled instructional periods. School boards in Nova Scotia must offer core French classes from grades 4 to 12. This program is compulsory for students in grades 4 to 9.

NOTE: All students entering grade 9 for the first time in September 1999 will be required to take core French. However, where offered, Mi'kmaq or Gaelic may fulfil this requirement.

Extended Core French

School boards may offer an extended core French program to those students in Anglophone schools who wish to develop a greater degree of competence in French. Extended core French begins in grade 7 and continues to grade 12. Students in this program take a French language arts course and one other subject (usually a social studies course) taught in French. The French

language arts course is designed to support the language needs of students in the second subject area taught in French. The curriculum of this second course parallels that of the course taught in the regular program.

French Immersion

School boards may offer a French immersion program. The immersion program is an alternate approach to learning French, Canada's second official language. The goal of the program is to help students develop a high degree of proficiency in French. Subjects taught in French parallel those offered in the regular program.

Early French Immersion

Early French immersion begins in grade primary and continues to grade 12. Students in this program receive a minimum of 80 percent instruction in French at the elementary level and 60 percent instruction in French at the junior high level.

Late French Immersion

Late French immersion begins in grade 7 and continues to grade 12. In each year of junior high, students take five courses in which the language of instruction is French. This constitutes approximately 70 percent of instruction in French.

French Immersion Certificate

To be eligible for the French immersion certificate, students must have been enrolled in an early or late French immersion program before entering high school. At the high school level, students must

- successfully complete the French immersion language arts course in grades 10, 11, and 12
- successfully complete, each year, a minimum of two courses in which the language of instruction is French (excluding core French)
- successfully complete a total of nine courses in which the language of instruction is French (this represents 50 percent of the number of credits required for graduation)

The courses offered in the early and late French immersion programs are described in section J of

this handbook and in *Programme des écoles publiques*, the French language version of the handbook.

COMMUNITY-BASED EDUCATION

NOTE: Community-based education is under review. Policy guidelines are being developed for co-operative education courses, school-to-work transition courses, work experience, and job shadowing programs. The consultation paper *Community-Based Education: Connecting Schools to the Community* is available from English Program Services. Revised guidelines will supersede current guidelines.

Co-operative Education

Through co-operative education, students may earn a high school credit by combining academic study and a carefully selected work placement.

Co-operative education courses consist of three components:

- orientation
- community placement
- reflective learning activities

The orientation must be structured to prepare students for the community placement.

The community placement component for each student must be carefully designed through co-operation between the school staff and the workplace host. The community placement must be regularly monitored and carefully evaluated, making use of the student's educational training plan. The learning plan must clearly indicate the goals and objectives of the community placement.

Reflective learning sessions must be held regularly throughout the school year, providing students with an opportunity, in an individual or group setting, to reflect on their community placement experience, to make specific connections between the community placement experience and the related public school program course, and to expand on the material learned in

the classroom. These activities are an integral part of all work education programs; however, they are emphasized and developed to a greater degree in co-operative education credit courses.

Co-operative education courses require a minimum of 160 hours combined work and study. A minimum of 120 hours must be spent in the community placement.

Co-operative education courses are usually taken only after a student has completed his/her first year of the senior high school program.

Work Experience

Work experience, also a segment of career education, provides students with opportunities to learn more about employment and the skills and attitudes necessary to obtain and hold a job. Work experience of limited duration may be a component of any of the secondary courses or programs offered in the school district but is not a total program. Students may be attached to business or industry for periods ranging from one half-day per week to blocks of time of one to three weeks. To improve the effectiveness of the experience, pre- and post-activities in the classroom should be related to the work experience.

All work experience programs must be approved by the Minister through English Program Services, Department of Education.

Work experience must be related to a school course, and students shall not be paid.

To receive approval for a work experience program, students must

- be at least 16 years of age, be mature enough to benefit from work experience, and should have prepared a career plan
- have written parental permission before becoming involved with any work experience
- be adequately supervised and evaluated during their work-experience activity by school board staff, who meet with co-operating employers and make regular visits, evaluations, and reports

- be covered by insurance for their work experience

Job Shadowing

Job shadowing is a short-term segment of a student's work education program and consists of a student observing or "shadowing" someone in a work situation. By observing workers in their workplaces, students gain insight into the workplace and see its demands. Job shadowing is of very short duration, usually one day, or at most, a few days spread over the school year, and is often developed by individual schools or teachers. Departmental approval is not required.

Teaching Guide

Co-operative Education and Work Experience in the Public Schools (Supplementary Document No. 60, 1990)

COMPREHENSIVE GUIDANCE AND COUNSELLING

The Comprehensive Guidance and Counselling Program is a vital component of a comprehensive school system. It is designed as a total school program with defined outcomes and benefits for all students. The program activities and services are developmental in nature and form an integral part of the educational experience for students from grades primary to 12.

The program provides direction by helping students acquire knowledge, attitudes, strategies, and skills in the four program domains:

- personal—to understand and appreciate oneself
- social—to relate effectively to others
- educational—to develop appropriate educational plans
- career—to develop life and career plans

The program includes both curriculum and service components in four key areas:

- ▶ guidance curriculum—structured classroom and group activities within the program domains
- ▶ life/career planning—activities that help students to plan, monitor, and manage their learning and to develop plans for their career development
- ▶ professional services—counselling, consultation, and co-ordination activities that meet the immediate needs and concerns of students
- ▶ program management—activities and strategies that establish, maintain, and enhance the overall program

The program has four key structural cornerstones that provide support to ensure that program goals and strategies aimed at addressing specific student needs at the school level are consistent with provincial guidelines. Each school that offers the program is required to have the following structural cornerstones in place:

- ▶ a program advisory committee—assists in the design, implementation, and evaluation of the program
- ▶ a needs assessment process—data gathered at the school level from students, teachers, and community to assist in developing the priorities and goals to address local student needs
- ▶ a program evaluation process—designed to determine success of program goals and to provide for future revision and direction
- ▶ a professionally qualified counsellor—mandatory for full program implementation as the counsellor's professional expertise is required to deliver specific program components

Elementary (Primary-Grade 6)

At the elementary school level, the guidance and counselling program is especially concerned with assisting students to develop self-awareness and to relate effectively to others. The program helps students adjust to the school environment and deal with personal and social issues. By making students aware of life and career planning, the program helps students develop an initial understanding of the meaning of work, of the

types of work being done, and roles in their homes, school, and community. Guidance counsellors in the program help students cope with crises in their lives and are significantly involved with community and social service agencies.

Junior High (Grades 7-9)

At the junior high school level, the comprehensive guidance and counselling program continues to help students in their exploration of self as they develop an understanding of their own interests, aptitudes, abilities, values, and attitudes. Guidance counsellors at this level use a variety of individual and group techniques to assist student development in personal, social, educational, and career development domains.

A major responsibility of the qualified guidance counsellor in the guidance and counselling program at the junior high level is crisis counselling. This often includes close co-operation with community and social service agencies. The guidance and counselling program also supports career planning and education as it helps students to

- ▶ develop skills in decision making and problem solving
- ▶ achieve more effective levels of personal planning and decision making within the context of their abilities, interests, personalities, and educational options
- ▶ appreciate the range of options open to them, as well as the education and training they will need in the future workplace
- ▶ understand the changing roles of men and women
- ▶ profit fully from the instructional activities of the school
- ▶ develop study skills

Senior High (Grades 10-12)

At the senior high level, the guidance and counselling program extends all aspects of the junior high program and prepares students for post-secondary education, training, and employment. Through instruction and both group

and individual guidance and counselling, students receive further practice and assistance in applying decision-making skills to personal situations, educational choices, and tentative occupational choices related to their interests, aptitudes, and values. In addition, qualified guidance counsellors help students cope with crises in their lives and work closely with community and social service agencies.

Teaching Guides

Comprehensive Guidance and Counselling
(Available Winter 1999)

INTEGRATION OF INFORMATION TECHNOLOGIES WITHIN SCHOOL PROGRAMS

The Vision for the Integration of Information Technologies Within the Nova Scotia Public School System was published in June 1999 and distributed to schools through the school boards. It is available on-line at <http://irt.EDnet.ns.ca>

This document provides the foundation for the integration of information technology within the public school system. This vision is concerned with enabling students to achieve essential graduation learnings and curriculum outcomes through the selection and integration of appropriate information technologies within the public school program. Courses such as Technology Education, Business Education and Computer-Related Studies will provide additional learning experiences that some learners may select so they can explore specific technologies more fully.

PROVINCIAL ASSESSMENT PROGRAMS

The purpose of the Nova Scotia assessment program is to provide information that supports teaching and learning and to report on the performance of the provincial education system.

The program comprises three components:

- assessments in mathematics, language arts, and science
- teacher involvement in the development, administration, and scoring of each assessment
- reporting of results

For grade 12, course-specific examinations in language arts, mathematics, and science are provided through the collaborative efforts of the four Atlantic provinces and facilitated by the Atlantic Provinces Education Foundation (APEF). Nova Scotia is the lead province for the development of grade 12 physics, chemistry, and English language arts. Assessments at other grade levels are prepared by the Testing and Evaluation Division of the Department of Education.

The APEF, in consultation with the Atlantic provinces, sets examination dates each May in the year preceding their administration. The schedule for APEF examinations is as follows:

English language arts	January 24 and June 19, 2000
Chemistry	January 25 and June 20, 2000
Biology	January 26 and June 21, 2000
Physics	January 27 and June 22, 2000

The schedule for examinations in grade 12 and assessments in elementary and junior high for Nova Scotia is published for schools each June preceding the new school year. This schedule provides information about the examinations and assessments conducted within the province.

Nova Scotia continues to participate in the School Achievement Indicators Program (SAIP), a project of the Council of Ministers of Education, Canada. SAIP will not be administered in the 1999-2000 school year. The third cycle of SAIP beginning with mathematics will be conducted in 2001. However, in May 2000, 15-year-old students enrolled in the public school program will participate in the Program for International Student Assessment (PISA) comprising a two-hour assessment of reading, mathematics, and science.

Further information and copies of the assessment schedule for 1999-2000 are available from

Testing and Evaluation Division
Department of Education
PO Box 578
Halifax NS B3J 2S9



POLICIES AND PROCEDURES

POLICIES AND PROCEDURES

ADVANCED COURSES

Consistent with the philosophy of common educational experiences at the grade 10 level, and increased opportunities for specialization at grades 11 and 12, the public school program includes advanced course offerings at grades 11 and 12.

English public school programs currently include provincially developed grade 11 and grade 12 advanced courses in biology, chemistry, and physics. In collaboration with the other Atlantic provinces, the department is developing advanced courses in mathematics for grades 11 and 12. In addition, a second advanced mathematics course in grade 12 is being developed for students who will be studying calculus in college or university.

International Baccalaureate (IB) grade 11 and 12 courses are recognized as advanced courses and may be credited towards graduation requirements whether taken as part of a complete IB program or as discrete courses.

Provincially developed advanced courses and approved locally developed advanced courses are categorized as either (a) a course offered *instead of* the related public school program academic course or related approved locally developed academic course, or (b) a course offered *in addition to* related public school program courses and designed to extend student learning in a particular field of study.

Advanced courses are characterized by additional content and by curriculum outcomes different from those of related courses offered in that subject area as academic credits. Advanced courses offer expanded and extended learning outcomes in both the theoretical and applied aspects of the subject area. Advanced courses balance learning experiences in three required areas: in-depth treatment of selected topics, independent learning and reflection, and extended research projects/case studies and related activities.

Schools should refer to *Advanced Courses Interim Policy Guidelines*, January 1999, for guidelines regarding locally developed advanced courses. Locally developed grade 10 advanced courses may not be offered after 1998-1999. With school board approval, schools may continue to offer for 1999-2000 previously existing, locally developed grades 11 and 12 advanced courses that have written approval from the department.

Requests to offer locally developed grades 11 and 12 advanced courses after 1999-2000 must be submitted by September 30, 1999, for approval. Thereafter, requests to offer locally developed grades 11 and 12 advanced courses must be submitted by February 28 in any year for approval of a course to be offered the following September and by September 30 for approval of a course to be offered from February of the following year.

Requests for approval of locally developed courses as advanced credits will be evaluated with reference to policy guidelines and to the framework provided by the principles of learning, the essential graduation learnings, and the general and specific curriculum outcomes of related public school programs and courses. Approval is also required for learning resources and teaching materials not included in the authorized lists to be used in locally developed and public school program advanced courses.

ASSESSMENT OF STUDENT LEARNING

Assessment is the systematic process of gathering information on student learning.

High quality assessments are essential to high quality education and have a well established link to student performance. Effective assessment practices can have a powerful effect upon learning.

Assessment policies and procedures should support the curriculum, instructional practices, and assessment strategies described in current curriculum documents. Practices should reflect current knowledge about how students learn and be flexible enough to meet the diverse needs of learners.

Purposes of Assessments

The primary purpose of assessments is to provide information to improve student achievement and instructional programs, and to produce a basis for evaluation.

Assessments help students to reflect on how well they have learned, to redirect their efforts, and to set goals for their future learning. To promote learning, assessments should be used to help students to recognize their learning strengths and needs and to identify ways they can further develop as learners.

Assessments enhance teachers' insights and knowledge about their students' learning needs and styles. Teachers use information gathered through assessments to describe what students know, are able to do, and are working toward. They use this information to provide students with useful feedback on a regular, ongoing basis, guiding their efforts toward improvement.

Reflection on this information helps teachers to evaluate the effectiveness of their instructional approaches and to consider how they might adapt them to address learners' needs.

Evaluation is the process of analysing, reflecting upon, and summarizing assessment information and making judgments or decisions based upon the information gathered.

Teachers and administrators use evaluations to communicate with parents about student learning and with others who require information about levels of student performance in relation to expected curriculum outcomes.

Principles of Assessment and Evaluation

Recognizing that the best interests of the student are paramount, teachers and administrators should use the following principles as the basis of assessment policies, procedures, and practices.

- ▶ Assessment strategies and tasks should be appropriate for and compatible with the purpose and the context of the assessment.
- ▶ Students should be provided with sufficient opportunity to demonstrate the knowledge, skills, attitudes, or behaviours being assessed.
- ▶ Procedures for judging or scoring student performance should be appropriate for the assessment method used and be consistently applied and monitored.
- ▶ Procedures for summarizing and interpreting results should yield accurate and informative representations of a student's performance in relation to the curriculum outcomes for the reporting period.
- ▶ Assessment reports should be clear, accurate, and of practical value to the audience for whom they are intended.

These principles highlight the need for an assessment process that

- ▶ informs teaching and promotes learning
- ▶ is an integral and ongoing part of the learning process
- ▶ is clearly related to and consistent with designated curriculum outcomes
- ▶ involves multiple sources of information
- ▶ provides a variety of means for students to demonstrate their learning
- ▶ is fair and equitable to all students
- ▶ accommodates the needs of students who require an individual program plan

While assessments may be used for different purposes and audiences, all assessments must give each student optimal opportunity to demonstrate what he/she knows and can do.

Classroom Assessment

Classroom assessment provides information about students' progress in achieving expected learning outcomes, by focussing on the significant aspects of the learning that the student must demonstrate. Teachers determine the aspects of learning on which to focus the assessment and the most appropriate assessment strategies and tasks to use for that purpose.

The teacher's use of a broad range of assessment strategies and tasks affords students multiple opportunities and a variety of ways to demonstrate their knowledge, skills, and attitudes. Teachers may rely on a variety of sources for their assessments, including

- the teacher's anecdotal records and teacher journals or log books
- conferences with the student
- observations
- peer assessment
- pencil and paper procedures (quizzes, tests, examinations)
- performance assessments
- the student's self-assessment
- student journals or log books
- students' work samples

Students benefit when they clearly understand the expectations for their learning. When students are aware of the outcomes for which they are responsible and the criteria by which their work will be assessed or evaluated, they can make informed decisions about the most effective ways to demonstrate what they know, are able to do, and value.

Students also benefit from opportunities to negotiate assessment and evaluation procedures. It is important that students participate actively in the assessment and evaluation of their learning, developing their own criteria and learning to judge a range of qualities in their work. Students who are empowered to assess their own progress are more likely to perceive their learning as its own reward and to develop as lifelong learners.

Assessment tasks should be meaningful and engaging to learners and should provide the

ongoing feedback students require to set goals for improving their learning and performance. Assessment strategies should also provide the feedback teachers need to determine areas requiring intervention and support and to tailor instruction to the individual learning needs and styles of their students.

Student performance should be evaluated according to specific criteria directly related to designated curriculum outcomes. Teachers bring to this process their insight, their knowledge about learning, and their experience with students.

Teachers have a special responsibility to ensure that assessment and evaluation procedures are clearly communicated to students and parents, to explain accurately what progress students are making in their learning, and to respond to student and parent inquiries about learning.

CHALLENGE FOR CREDIT

The challenge for credit process allows the school to recognize that a student has already acquired the skills, knowledge, and attitudes that an existing course seeks to develop.

Challenge for credit may occur in fine arts, languages, mathematics, and physical education. Schools, through their boards, may apply to the department to offer challenge for credit on a pilot basis in subject areas other than those listed above.

INDEPENDENT STUDY

Students may be granted one independent study credit in each of grades 11 and 12. Independent study credits help promote individualized programming and allow students to initiate and develop courses tailored to their needs, abilities, and interests.

INTERNET ACCESS AND USE POLICY

Students in public schools in Nova Scotia will select from a variety of information sources, including the Internet, to support and extend their learning. Using the Internet in schools will allow students to access local, national, and international electronic information sources and to collaborate with peers and experts to solve curriculum-related problems. Having access to information and collaborating with others are vital to intellectual inquiry in a democracy.

A detailed *Internet Access and Use Policy* was distributed to schools in May 1997 and is available on-line at www.EDnet.ns.ca/educ/d_depot/internet/english/access.htm

LOCALLY DEVELOPED COURSES

Approval is required to offer a course not included in the authorized programs named in this document, as well as for the use of related learning resources and teaching materials not included in the authorized lists.

Application forms for locally developed courses are available from English Program Services and must be returned to the English Program Services Division by **February 28** in any year for approval of a course to be offered the following September and by **September 30** for approval of a course to be offered from February of the following year.

The regional board and consultants from the Department of Education will monitor and evaluate approved locally developed courses.

POLICY FOR FRENCH SECOND LANGUAGE PROGRAMS

The Department of Education, Acadian and French Language Services Branch, is responsible for providing leadership and orientation for

French second language programs in Nova Scotia public schools.

Program Policy for French Second Language Programs provides Nova Scotia school boards, schools, and teachers with direction regarding the delivery of French second language programs. This document provides a description of the different French second language programs offered in the province as well as policies and guidelines regarding program implementation.

The policy is available through the Acadian and French Language Services Branch of the Department of Education.

PROGRESS OF STUDENTS

The Department of Education expects school boards to implement policies and practices that will encourage each student to make maximum progress according to his/her needs and abilities. From elementary through senior high school, instruction must be adapted to meet the varying rates and patterns of learning of all students and to satisfy students' individual needs.

The assessment of progress should be based on the department's programs and course descriptions and on statements of expected learning outcomes. Schools are responsible for creating the learning environments that will encourage students to make maximum progress. School boards should review their policies regularly to ensure that they reflect the department's expectations.

To help students develop to their fullest potential, school boards should ensure that procedures are in place for the continuous appraisal of each student's growth. These informal and formal appraisals should assess students' emotional, social, physical, and intellectual development. School boards are responsible for students' placement within schools. They should base their decisions on the assessments they have conducted.

A board's policies on assessment and on the placement of students may differ for elementary, junior, and senior high levels but should be

applied consistently at each level across the region.

Teachers' reports on a student's progress, either oral or written, should focus on the individual student's growth and development in comparison with the expectations of the provincial program. Reports should not make comparisons with other students or classes. It is of the utmost importance that the reporting system reflect the aims of the program, and that from the report, students and parents can readily understand the individual's development and level of performance in relation to the program's expected learning outcomes.

ROLES AND RESPONSIBILITIES OF PARTNERS

Achieving the goals of the public school program requires schools and classrooms that focus on providing excellence in teaching and learning. Achieving this level of quality can best be done through teamwork where partners have meaningful involvement in decision making.

Success in schooling begins in and is sustained by the home. The family is the centre of learning. Parents are the child's first teachers.

If students are to be successful learners, parents must demonstrate their respect for education and value its worth. Students should know that their family, school, and community have high expectations of them and will work together to help them achieve these high expectations.

The Education Act (1996) specifies roles and responsibilities for students, parents, teachers, principals, superintendents, support staff, and school boards. The Act also specifies the roles and responsibilities for school advisory councils. A School Advisory Council is a legally recognized body composed of the principal and representatives of teachers, support staff, students, parents, and community members who work together in an advisory capacity to increase the quality of education the school provides. The fundamental purpose of the School Council is to ensure that all students receive the best possible

learning opportunities by engaging all partners in an ongoing process of problem solving and shared decision making. For further information, the following documents should be consulted:

The Education Act (1996)
School Advisory Council Handbook Series:
Establishing School Advisory Councils (1995)
Developing School Improvement Plans (1996)
Special Education Policy Manual (1996)

SPECIAL EDUCATION POLICY

Special education policies, regulations, guidelines, and procedures are outlined in the *Special Education Policy Manual*, 1996. This manual describes the principles, student services and supports, programs, and partnerships that collectively ensure a co-ordinated and consistent approach to program planning and service delivery. As part of the public school program in each school in their jurisdiction, school boards are required to provide programming and services for students with special needs and to give parents of students with special needs the opportunity to participate in the development of an individualized program for their children.

STUDENT RECORDS

Student records are confidential. A student's record, however, should be available to parents or guardians who should, if necessary, be given a careful explanation of its significance. Records should also be readily available to school professional staff who need the information to provide students with the most appropriate guidance.

The information may also be released to appropriate agencies with parental or guardian consent or with student consent if the student has reached 19 years of age, the age of majority. Such students may legally request that the information *not* be disclosed.

When a student changes school, his/her original cumulative record should be forwarded to the new

school. The initiating school should keep copies of those documents until the receiving school acknowledges receipt of the originals.

Further information on student records is provided in *The Nova Scotia Student Cumulative Record Folder Completion Instructions*, Halifax, 1988.

RESOURCES AND SERVICES



RESOURCES AND SERVICES

AFRICAN CANADIAN SERVICES

The African Canadian Services Division, located within the Program Branch, was established in 1996 and is responsible for co-ordinating and developing the Department of Education's response to the *Black Learners Advisory Committee's Report on Education*. The implementation of the report's recommendations focusses on elementary and secondary education, ensuring that curriculum programs and services in the public school system reflect the needs of Black learners. The African Canadian Services Division also provides advice and guidance to all other branches and divisions of the department regarding African Canadian education.

African Canadian education is defined in Section 3(a) of the Education Act as "the development of programs, resources, and learning materials that provide information about and promote understanding of African people and their history, heritage, culture, traditions, and contributions to society, recognizing their origins as Africans."

African Canadian Services, in co-operation with English Program Services, plays a key role in ensuring that all students and teachers have the benefit of anti-racism education and information.

African Canadian Studies 11

African Canadian Services has developed a new social studies course, African Canadian Studies 11. While it is offered at the grade 11 level, the course is available to grade 10 and 12 students as well. Details of this course may be found in Section S of this handbook.

African Canadian Education

In accordance with the Education Act, Section 140 (a)(b), the Department of Education expects school boards to "provide and implement programs and policies promoting African-Canadian education; and include in learning

materials information respecting the history, heritage, culture, traditions, and the contribution to society of African people."

Administrators, teachers, and support staff should foster sensitivity to African Nova Scotian students' emotional, psychological, physical, and learning needs. All administrators, teachers, and support staff should demonstrate high expectations of African Nova Scotian students, respect for their interests and cultural background, and sensitivity to their needs.

School boards have an obligation to communicate and enforce equity standards and, therefore, should develop and implement anti-racism policies.

Resource

BLAC Report on Education: Redressing Inequity—Empowering Black Learners
(Vol. 1, 2 & 3, 1994)

ATLANTIC PROVINCES SPECIAL EDUCATION AUTHORITY (APSEA)

The Atlantic Provinces Special Education Authority (APSEA) provides educational services, programs, and opportunities for students who are blind, visually impaired, deaf, hard of hearing, and deafblind. While school boards are the direct educational service providers for all school-aged children, APSEA helps to meet the specific needs of students with sensory disabilities through assessment, direct instruction, consultation, and provision of adaptive equipment and technology.

Access to programs and services for school-aged children and youth designed to assist students in meeting outcomes is available through a referral by the school principal in conjunction with the program planning team.

ATLANTIC SATELLITE NETWORK

Under the current licensing agreement between the Canadian Radio and Telecommunications Commission and the Atlantic Satellite Network, the Department of Education has access to up to 23 hours of broadcast time per week, most of which is used by post-secondary institutions throughout the Atlantic provinces. The Education Media Library (see below) also broadcasts classroom and professional development titles from the duplication collection. Copies of these titles may be ordered.

CENTRE FOR ENTREPRENEURSHIP EDUCATION AND DEVELOPMENT (CEED)

Launched in December 1995, the Centre for Entrepreneurship Education and Development (CEED) is a division of the Department of Education with a broad mandate covering many aspects of entrepreneurship. Envisioning a vibrant, self-reliant entrepreneurial culture, CEED's mission is to nurture entrepreneurship in young people by creating, co-ordinating, and acting as a catalyst in entrepreneurship education, research and program design, professional development, and community entrepreneurship.

CEED offers a wide variety of resources and support to educators at all levels. Some examples are

- ▶ an opportunity for educators to network and look at ways they can work together
- ▶ *Future Quest*—a business creation program for aspiring entrepreneurs aged 16–30
- ▶ *Open for Business*—a storefront, drop-in centre for youth wanting to be self-employed
- ▶ *Summer Institute*—a week-long immersion in entrepreneurship offered to educators as an annual professional development opportunity
- ▶ *Workplace Experience*—a community-based experience that provides educators with the opportunity to bring first-hand business experience back to their classrooms

- ▶ *Young Entrepreneurs Going Places Conference*—an annual three-day event offering youth opportunities to network, learn, and showcase their talents
- ▶ *Entrepreneurship: A Way of Life*—a resource for high school entrepreneurship programs

For information on these and other entrepreneurship education initiatives, contact

Centre for Entrepreneurship Education
Development
1521 Grafton Street
PO Box 578
Halifax NS B3J 2S9
Telephone: (902) 424-7609
Fax: (902) 424-0260
Web site: www.ceed.EDnet.ns.ca

CENTRE PROVINCIAL DES RESSOURCES PÉDAGOGIQUES (CPRP)

The Centre provincial de ressources pédagogiques (CPRP) (Provincial Centre for Educational Resources) was founded in 1979 by Université Sainte-Anne in Pointe-de-l'Église to meet the needs of Acadian and Francophone teachers in Nova Scotia. It became affiliated with the Nova Scotia Department of Education in 1988.

The staff of the CPRP co-operate closely with the Nova Scotia Department of Education and the school districts to support instruction of French and in French throughout the Acadian and immersion school programs in the province.

Lending Library

The CPRP's holdings presently include more than 80 000 items in a wide variety of media: teachers' guides, slides, CD-ROMs, video cassettes, geographical maps, textbooks, exercise books, educational games, and kits. This educational material is available to all French first-language and immersion educators, and a catalogue of the CPRP holdings is distributed to all the Acadian and Francophone schools in the province, as well

as to schools with immersion programs. Teachers can order by mail, by fax, by e-mail or by phone. Over the last five years, the CPRP has lent more than 250 000 documents to teachers in the province. The Internet address for the lending library is <http://cprp.EDnet.ns.ca>

Teachers may order by e-mail from either of the CPRP's two locations

Pointe-de-l'Église
cprppde@ustanne.EDnet.ns.ca

Petit-de-Grat
cprpcb@csap-ne.EDnet.ns.ca

The CPRP pays the postage fees for returning the material to its offices.

Professional Development Services

CPRP staff members hold regular meetings with teachers and students to help them learn how to use the documents of the CPRP, develop themes, and lead in-service workshops.

CPRP staff also take part in Department of Education work groups responsible for reviewing Acadian school programs.

CPRP publishes a bimonthly newsletter entitled *Entre Nous*, which is distributed to teachers of Acadian, Francophone, and immersion programs in the province, as well as to school administrators and students in the education program at Université Sainte-Anne. The newsletter contains in-depth articles as well as information on the CPRP's activities and services.

Publication Services

The aim of the CPRP's Publication Services is to produce educational documents that meet the specific needs of the Department of Education's curriculum specialists/teaching staff. Priority is given to projects developed for new French programs; the Centre is thus able to produce specialized documents that are of immediate value to teachers.

The CPRP has two locations. The head office is located at Church Point in the Centre Bernardin-Comeau of Université Sainte-Anne, and the other office is located in La Picasse in Petit-de-Grat. Contact information is as follows:

CPRP
 C.P. 160
 Pointe-de-l'Église, N.-É. B0W 1M0
 Telephone: (902) 769-9000
 Fax: (902) 769-3398
 E-mail: cprppde@ustanne.EDnet.ns.ca

CPRP
 C.P. 3000
 Arichat N.-É. B0E 1A0
 Telephone: (902) 226-2777
 Fax: (902) 226-0200
 E-mail: cprpcb@csap-ne.EDnet.ns.ca

Resource Centre for Acadian Preschool Programs

The Centre provincial de ressources préscolaires is based in the CPRP's main offices at Pointe-de-l'Église. The centre has a lending library of educational resources for Acadian Preschool programs. Its lending library has over 4 500 documents, and its holdings may be consulted on the Web at <http://cprp.EDnet.ns.ca>

The Centre provincial de ressources préscolaires pays the postage fees for returning the material to its offices. Contact information is as follows:

Centre provincial de ressources préscolaires
 C.P. 160
 Pointe-de-l'Église N.-É. B0W 1M0
 Telephone: (902) 769-9000
 Fax: (902) 769-3398
 E-mail: cprppde@ustanne.EDnet.ns.ca

CORRESPONDENCE COURSES

Through the Correspondence Study Program, the Nova Scotia Department of Education offers people the opportunity to complete their secondary school education while learning at home. More than 2 000 adults and school-age children enrol each year in public school courses from grades 7 to 12, as well as in some non-public school courses.

Public school correspondence courses follow the curriculum prescribed for Nova Scotia schools and use textbooks and other resource materials from the *Authorized Learning Resources*. The course work is marked by certified teachers who understand the special needs and circumstances of students who study at home.

Registration is continuous in correspondence studies, and progress is self-paced. When a student successfully completes a course, a certificate is issued that can be credited towards junior or senior high school completion.

Persons may enrol in a correspondence course if they

- ▶ live in Nova Scotia, are 16 or over, and are not attending school
- ▶ live in Nova Scotia, are under 16 years old, and are legally excused from attending school (in this case, the principal at the student's last school must sign the application form, giving his or her approval)
- ▶ are attending junior or senior high school (grades 7-12) and have the approval of their principal and if any of the following situations exist:
 - ▶ the course is not offered in their schools
 - ▶ there are timetable conflicts
 - ▶ they want to study subjects during the summer months, but the courses are not offered in the summer
 - ▶ the principal recommends, for some other reason, that they take the courses by correspondence
- ▶ are junior or senior high school students who previously attended school in Nova Scotia but are temporarily living out of the province or country (students living away from Canada should provide the name and address of a contact person in Nova Scotia)
- ▶ are adults who normally live in Nova Scotia, but who have been living out of the province or country for less than three years (applicants should provide the name and address of a contact person in Nova Scotia)
- ▶ are non-residents of Nova Scotia interested in taking a secondary school level course for personal interest or credit

For more information, write to

Correspondence Study Program
PO Box 1650
Halifax NS B3J 2Z2
Telephone: (902) 424-4054

EDUCATION MEDIA LIBRARY

The Education Media Library resource catalogue and its regular updates are available to all Nova Scotia schools as a paper document and on EDnet. Thousands of titles are available to Nova Scotian educators. The loan service is free, and schools pay only the cost of the blank cassette to obtain duplication resources. Teachers are welcome to book time in the library's preview room for a personal evaluation of classroom resources.

Schools may arrange to borrow or copy resources from the Education Media Library collection by telephone, fax, e-mail or electronic order form. In addition, order forms are available in all schools. Early booking is encouraged. Loan resources are shipped to schools by mail on a free-return basis. Education Media Library holdings in the audio and videotape dubbing collection are not available for circulation; however, a copy of any title will be made at no charge to any school requesting it. Every request must be accompanied by a sufficient quantity of quality, name-brand cassettes or a school or district purchase order to cover the at-cost price of the blank cassettes. All school orders are filled on a first-come, first-served basis. Many programs include teaching guides or other support materials.

Contact information is as follows:

General Inquiry

Telephone: (902) 424-2462

Fax: (902) 424-0633

Education Media Library

Telephone: (902) 424-2440

Web site: <http://lrt.EDnet.ns.ca>

ENGLISH AS A SECOND LANGUAGE (ESL)

The Department of Education recognizes the language and culture complexities that English as a Second Language (ESL) learners face. These learners may require short-term and/or ongoing support to meet their multicultural/ multilinguistic needs. ESL learners include students who are newcomers to Nova Scotia from non-English speaking countries, second generation immigrant students, international students, and some indigenous students. In consultation with parents and representative organizations, the department works collaboratively with regional school boards to support programming for ESL learners by developing guides, resources, and consulting services.

The department supports in-services in such areas as teaching strategies, cultural awareness, assessment, and resource allocation. The leadership for ESL rests within the mandate of the Student Services Division.

Supplementary Resources

Administrators' ESL Resource Document (English as a Second Language) (1994)

ESL Resource Document (English as a Second Language) for Teachers/Support Staff (1994)

ESL Teaching Resource Kit (Elementary) TESL Nova Scotia and Department of Education and Culture (Revised 1994)

LEARNING RESOURCES AND TECHNOLOGY (LRT)

Learning Resources and Technology (LRT) is the centralized, educational technology facility of the Department of Education. LRT provides non-print curriculum materials and professional development resources that reflect the program goals and priorities of the Nova Scotia Department of Education.

Curriculum Units

LRT creates and evaluates a range of electronic, multimedia resources that are related to school curriculum or teachers' professional development. The LRT home page organizes, by broad subject areas, links to evaluated curriculum units and Web sites throughout the world. The list of resources constantly grows and changes, and LRT encourages teachers to recommend additional educational sites.

Production

The production section of LRT designs, develops, and produces video, audio, graphic, photographic, and multimedia materials that support the public school program and the programming and research needs of the Heritage and Culture Branch. Many LRT productions are listed in its Media Library collection.

Contact information for LRT resources is as follows:

General Inquiry

Telephone: (902) 424-2462

Fax: (902) 424-0633

Education Media Library

Telephone: (902) 424-2440

Technology Demonstration Centre

Telephone: (902) 424-2450

Website: <http://lrt.EDnet.ns.ca>

Mi'kmaq Services

The Mi'kmaq Services Division within the Department of Education was established in 1997 in response to the recommendation of the Task Force on Mi'kmaq Education. The Task Force became the Council on Mi'kmaq Education (CME) in 1997 and continues to make recommendations to the Minister of Education addressing the needs of Mi'kmaq students in the public school system. The Mi'kmaq Services Division is responsible for providing the leadership, direction, and planning required to develop and implement the policies, procedures, programs and services that will ensure Mi'kmaq Nova Scotians benefit from a fully supportive learning environment in the public schools.

The Mi'kmaq have been defined in the Education Act as "all first-nation people, whether living on or off a reserve." The Education Act defines Mi'kmaq education as "the development of programs, resources, and learning materials that provide information about, and promote understanding of the Mi'kmaq and their history, heritage, language, culture, traditions, and contributions to society and that recognize their origins as first-nations people."

The Department of Education recognizes that education must be attuned to the cultural and language needs of Mi'kmaq students. Through partnerships with parents and Mi'kmaq educational organizations, the department is committed to developing and delivering programs in Mi'kmaq heritage, history, language, and culture. Leadership for the development of Mi'kmaq courses continues to be shared by English Program Services, and Mi'kmaq Services with the Department of Education.

Mi'kmaq Studies 10

A Mi'kmaq Studies course has been developed for the grade 10 level as an option in Social Studies. This course will enable students to achieve a greater understanding of and respect for Mi'kmaq contributions to society.

Mi'kmaq Language 7

Mi'kmaq Language 7, which will provide an option for junior high students for the fulfilment of a second language requirement, is in the process of development. Mi'kmaq Language will be piloted in selected public schools in September 1999. Language curriculum will continue to be developed to include Grade 8 and Grade 9 in following years.

Mi'kmaq Education

In accordance with the Education Act, Section 138 (a)(b), the Department of Education expects school boards to "provide and implement programs and policies promoting Mi'kmaq education; and include in learning materials information respecting the history, language heritage, culture, traditions, and the contribution to society of the Mi'kmaq."

The Mi'kmaq Services Division collaborates with Mi'kmaw Kina'matnewey Education and the Band Chiefs on educational initiatives and issues to improve the quality of education for on-reserve and off-reserve Mi'kmaq students. Mi'kmaq Services plays a key role in ensuring that all students and teachers have the benefit of anti-racism education and that equity standards in the workplace are being exercised.

NOVA SCOTIA CENTRE FOR CRAFT AND DESIGN

Located at 1683 Barrington Street in Halifax, the Nova Scotia Centre for Craft Design offers instruction in a number of craft media in the form of workshops or 6- to 12-week courses for amateurs and professionals. In its Mary E. Black Gallery, the centre also displays the work of Nova Scotian craftspeople and designers as temporary exhibitions. Exhibits change every six to eight weeks and are open to the public weekdays during the day. School tours may be made by prior arrangement. For information on the centre and its programs, contact

Manager, Crafts, Design, and Publishing

Telephone: (902) 424-4062

E-mail: tylercd@gov.ns.ca

Web site: <http://crafts.EDnet.ns.ca>

NOVA SCOTIA MUSEUM

The Nova Scotia Museum comprises 25 museums across the province, with headquarters in Halifax. The Museum collects, preserves, and interprets objects that help us to understand various aspects of Nova Scotia's human and natural history.

Museums are informal learning places, offering exciting, intellectually-stimulating, hands-on experiences with real objects and specimens.

Several provincial museums are open year-round; the seasonal sites are open June 1 until October 15. Some services offered by the Museum are described below.

- ▶ Interactive school classes on curriculum-related topics are given at the Nova Scotia Museum of Natural History, Maritime Museum of the Atlantic, the Firefighters Museum of Nova Scotia, Fundy Geological Museum, Sutherland Steam Mill, Fisherman's Life Museum, Prescott House Museum, Sherbrooke Village, Ross Farm Museum, Ross-Thomson House Museum, the Museum of Industry, and the Fisheries Museum of the Atlantic. All museums welcome class visits. French-language programs are offered at the Nova Scotia Museum of Natural History.
- ▶ About 30 different school loan kits may be borrowed free from 14 distribution centres across the province. Some are bilingual. These include multimedia material, collection sets, slide-tapes, and a variety of individual artifacts and specimens. For more information, call (902) 424-6524.
- ▶ The Nova Scotia Museum publishes a variety of books and pamphlets on Nova Scotia history and natural history.
- ▶ An identification service is available for artifacts and specimens brought in to Museum sites.
- ▶ Curatorial staff respond to individual inquiries from teachers and students and will provide

in-service and pre-service training about Museum resources of specific history and natural history subjects.

- ▶ The annual *Learning Resources Catalogue*, available each September free from the Museum, describes all museum services to schools.

For further information, contact the individual museums listed below.

- Balmoral Grist Mill, Balmoral Mills
(902) 657-3016
- Barrington Woolen Mill (902) 637-2185
- Cossit House, Sydney (902) 539-7973
- The Dory Shop Museum, Shelburne
(902) 875-3219
- Firefighters Museum of Nova Scotia, Yarmouth
(902) 742-5525
- Fisheries Museum of the Atlantic, Lunenburg
(902) 634-4794
- Fisherman's Life Museum, Jeddore
(902) 889-2053
- Fundy Geological Museum, Parrsboro
(902) 254-3814
- Haliburton House Museum, Windsor
(902) 798-2915
- Lawrence House Museum, Maitland
(902) 261-2628
- Maritime Museum of the Atlantic, Halifax
(902) 424-7715
- McCulloch House Museum, Pictou
(902) 485-4563
- North Hills Museum, Granville Ferry
(902) 532-2168
- Nova Scotia Museum of Industry, Stellarton
(902) 755-5425
- Nova Scotia Museum of Natural History, Halifax
(902) 424-6512
- Old Meeting House, Barrington (902) 637-2185
- Perkins House Museum, Liverpool (902) 354-4058
- Prescott House Museum, Starr's Point
(902) 542-3984
- Ross Farm Museum, New Ross (902) 689-2210
- Ross-Thomson House Museum, Shelburne
(902) 875-3141
- Shand House Museum, Windsor (902) 798-8213
- Sherbrooke Village (902) 522-2400
- Sutherland Steam Mill, Denmark (902) 657-3365

Uniacke Estate Museum Park, Mount Uniacke
(902) 866-0032
Wile Carding Mill, Bridgewater (902) 543-8233

NOVA SCOTIA TALENT TRUST (NSTT)

The Nova Scotia Talent Trust (NSTT) is a charitable organization funded and administered by the Cultural Affairs Division. The Trust provides scholarship assistance to people studying in the arts whose goals are to become established creative artists. The Trust supports study in literary, media, performing and visual arts, including attendance at summer camps and institutes, full-time university and conservatory study, private and self-directed study, mentorships, and apprenticeships. The Trust has three deadlines each year: April 15 for summer study, June 1 for study beginning or continuing in the fall, and October 15 for study beginning or continuing in the winter. For information on eligibility and application requirements, contact the NSTT Secretary in Halifax at (902) 424-4179.

PERFORM!

Perform! is a cost-shared program that gives schools an opportunity to bring professional choral, dance, and theatre artists into their schools. Its primary goal is to enhance learning by involving performers in the delivery of drama, music, and dance curricula. Through Perform! students and teachers will have opportunities to work with professional artists to explore and develop their performance skills and creativity. The program is a joint initiative of the Nova Scotia Drama League, Dance Nova Scotia, and the Nova Scotia Choral Federation, and is administered by the Drama League. For information on the performers available, booking, and costs, contact the Drama League in Halifax at (902) 425-3876.

PROFESSIONAL ARTISTS IN THE SCHOOLS (PAINTS)

Professional Artists in the Schools (PAINTS) is a cost-shared program that gives schools an opportunity to bring professional visual artists into their schools to enhance the delivery of art education. Artists in a wide range of media are available to visit the classroom. Visiting artists do not necessarily provide art instruction but discuss processes of making art and give students new ways of looking at artworks. Visual Arts Nova Scotia (VANS) administers this program for the Cultural Affairs Division. For information on the artists available, booking, and costs, contact VANS in Halifax at (902) 423-4694.

PROFESSIONAL DEVELOPMENT

The Student Services Division is responsible for working with department and school board personnel to assist in the planning and implementation of professional development programs in the public school system.

PROVISION OF LEARNING RESOURCES

Learning resources are provided to schools through a credit allocation system based on student enrolment. The credit allocation system is intended to ensure that schools maintain an adequate supply of the materials already in use and are able to acquire selected or required newly listed materials, including educational computer software. The total amount of credit allotted to each board is calculated on the basis of enrolments.

The credit allocation is used to purchase authorized materials for approved programs in each school and for the repair of textbooks.

The total cost of items must not exceed the board's credit allocation. Boards may not carry over credit from one year to the next. While the

School Book Bureau maintains accurate accounts for each board, each board is responsible for ensuring it does not exceed its credit allocation. All unused credit expires March 31.

Details regarding the provision of authorized learning resources are available in the publication *Authorized Learning Resources, Integrated Catalogue/Order Form*. This publication provides information on the authorized learning resources and gives instructions for ordering.

The *Authorized Learning Resources Integrated Catalogue/Order Form* provides information in the following categories:

- ▶ Elementary P-6
- ▶ Junior/Senior High 7-12
- ▶ Écoles acadiennes et Programmes d'immersion M-12
- ▶ Educational Software All Levels

Copies of *Authorized Learning Resources* are distributed, according to anticipated needs, to superintendents, supervisory personnel and specialists, and school principals. Additional copies may be requested from

English Program Services
Department of Education
PO Box 578
Halifax NS B3J 2S9

Both the catalogue/order form and a searchable database for *Authorized Learning Resources* are available on-line at <http://alr.EDnet.ns.ca>

All school personnel are expected to have knowledge of and access to the lists and related order forms.

Schools may use an amount not exceeding 25 percent of the credit allocation for ordering materials through English Program Services that are not on the School Book Bureau lists. The 25 percent credit allocation may be used to request

- ▶ examination copies of materials not on the authorized lists
- ▶ examination copies of materials authorized for the next school year

- ▶ materials that are not listed but that reflect the philosophies of the provincial programs
- ▶ materials to meet special needs of individuals, groups, or communities

The materials may be requested if funds are available in the credit allocation. Charges will be applied to the school board's 25 percent credit allocation.

It is the school board's responsibility to examine materials obtained through the 25 percent credit allocation for any evidence of bias or offensive language. Items that *may not* be purchased through the 25 percent allocation are outlined on the request form.

Procedures for using the 25 percent credit allocation are detailed on the *Form for Using 25% of the Credit Allocation*. This form is available from the school boards. In general, this is the procedure:

1. The *Form for Using 25% of the Credit Allocation* is filled out, providing titles of materials, publishers, reasons for request, and a declaration that materials are free from bias. The form is approved by board staff.
2. The superintendent forwards the approved form to the Department of Education for consideration. The School Book Bureau assigns an authorization number.
3. The form is returned to the superintendent of the regional school board, who prepares school board order forms and submits them to the publishers.
4. Upon receipt of the materials and payment of the invoice, the board personnel submit copies of the invoices to the School Book Bureau for reimbursement with the authorization number on the reimbursement request. The invoices are sent to

Nova Scotia School Book Bureau
PO Box 2105
Halifax NS B3J 3B7

RACE RELATIONS AND CROSS-CULTURAL UNDERSTANDING

Within the Department of Education, the Student Services Division provides leadership in race relations, multicultural/multilinguistic education, anti-racist education, cross-cultural understanding, and human rights issues. The division meets its objectives by co-operating with other Department of Education staff, in particular, the African Canadian Services Division and the Mi'kmaq Services Division, and with external educational partners, such as school boards, universities, associations, other government agencies, and the general public.

The division is responsible for identifying and implementing policy, programs, and activities relating to race relations and recognition of cultural differences. In its broadest sense, race relations includes anti-racist education, cross-cultural understanding, multicultural education, and human rights. The division's responsibilities include providing input into and responding to programming, curriculum guides, support documents, and learning resources relating to race relations and cross-cultural understanding. Its responsibilities include initiating and presenting workshops and seminars for the Department of Education staff.

Supplementary Resources

Multicultural Education Resource Listing
(Revised 1999)

Community Resource Listing (Revised 1999)

SCHOOL LIBRARY SERVICES

The school library introduces students to a wide range of print, non-print, and electronic learning resources. Using electronic information sources (e.g., databases, CD-ROM, the Internet) offers students the opportunity to develop technological competence while enhancing their print literacy and developing their critical thinking skills.

The teacher-librarian plans, teaches, and evaluates assignments co-operatively with other teachers to combine information literacy with the school and classroom program. Library staff and teachers work collaboratively, using shared expertise to meet the defined educational goals of the school.

In addition to making valuable curriculum connections, school library staff work with outside agencies (e.g., other libraries) to promote resource sharing. Current information should reflect respect for all peoples, being free of gender, racial, and other biases. Ensuring that the collection is balanced and that it supports the curriculum and students' personal needs is the responsibility of the professional staff.

STUDENT SERVICES

The Student Services Division is responsible for creating and developing a framework for student services for the province of Nova Scotia, including setting its direction and establishing its vision, goals, and action plans. This framework includes providing direction and leadership to school boards on implementing and evaluating programs and services for students in the areas of special education (see Programming for Students with Special Needs in Section B), guidance and counselling, Mi'kmaq education, English as a Second Language, and multicultural education.

In addition, this division designs and delivers professional development programs for teachers and administrators from grades primary to 12.

TECHNOLOGY DEMONSTRATION CENTRE

The Technology Demonstration Centre at Learning Resources and Technology co-ordinates the evaluation of educational technology and software for Nova Scotian classroom use. Before investing school funds, teachers may reserve time at the centre to evaluate hardware or software for its fit with their students' needs. Results of software evaluations are available on EDnet. In

addition, the centre provides to school boards consultation and training services in using and applying educational technology.

Contact information is as follows:

General Inquiry

Telephone: (902) 424-2462

Fax: (902) 424-0633

Technology Demonstration Centre

Telephone: (902) 424-2450

Web site: <http://lrr.EDnet.ns.ca>

TECHNOLOGY RECYCLING

With Nova Knowledge and other partners, the Technology Recycling Program helps learners of all ages by encouraging government, businesses, and individuals to donate software and other surplus information technology for use in schools and related institutions. Volunteers and computer maintenance students refurbish and test all donated equipment. The school boards distribute the refurbished equipment and software to schools.

WRITERS IN THE SCHOOL (WITS)

Writers in the School (WITS) is a cost-shared program that gives schools an opportunity to bring professional writers to enhance the delivery of language and literary arts education. Writers normally spend a half or full day in a school, giving insights to students on writing and reading and inspiring fresh ideas. Their input also gives students and teachers a better understanding of a writer's life and work. The Writer's Federation of Nova Scotia (WFNS) administers this program for the Cultural Affairs Division. For information on the writers available, booking, and cost, contact WFNS in Halifax at (902) 423-8116.

PROGRAM AND COURSE DESCRIPTIONS



PROGRAM AND COURSE DESCRIPTIONS

ARTS EDUCATION

Foundation for Arts Education Curriculum (validation draft, 1998) provides a framework for all arts courses. *Foundation for Atlantic Canada Arts Education* is being developed and is scheduled for validation in the spring of 2000.

Dance

NOTE: See physical education for the dance curriculum for elementary and junior high programs.

Dance 11 (academic, 1 credit)

Course Code: 043003

Dance 11 is designed for all students, with or without previous formal dance training, and builds on student's experiences in dance throughout the physical education curriculum, grades primary to nine. It emphasizes creative movement as a form of communication and self-expression, as a unique way of learning about oneself and others.

Learning experiences in this course offer students opportunities to explore a range of dance styles with more focussed work in a few genres; create and present dance sequences; respond critically to their own dance works and those of others; and make connections with dance in local and global contexts, both past and present. Students also have opportunities to examine the connections between dance and other arts disciplines. The course comprises four components: elements of movement, creation and composition, presentation and performance, and dance and society.

This course satisfies the compulsory fine arts credit requirement.

Drama

Elementary (Primary-Grade 6) and Junior High (Grades 7-9)

Drama-learning activities can be effectively infused throughout the elementary and junior high curriculum. Through drama experiences, students gain opportunities to increase their understanding of others, themselves, and the world around them; to increase their ability to construct and communicate meaning through language and movement; and to deepen their understanding of cultural and social traditions. Within the dramatic context, a wide variety of drama strategies can be used to explore themes, stretch thinking, solve problems, extend use of language, broaden frames of reference, deepen the understanding of self and others, and gain an understanding of dramatic forms.

Senior High (Grades 10-12)

Drama 10 (academic, 1 credit)

Course Code: 004159

Drama 10 is an introductory course in drama focussing on the personal, intellectual, and social growth of the student. Drama 10 provides a foundation for future course work in drama and theatre. Through extensive work in improvisation, in both small and large groups, students gain confidence as they explore and communicate ideas, experiences, and feelings in a range of dramatic forms, such as dramatic movement and mime, dramatization, choral speech, choric drama, group drama, and Readers Theatre.

Drama 10 comprises four components: foundation, movement, speech, and theatre. The foundation component, which focusses on building student confidence and trust and creating a supportive learning environment, introduces students to the essential elements of movement and speech. Experiences in movement and speech are extended in the movement and speech components and combined in the exploration of the various dramatic forms.

Opportunities for students to share and present their work are provided throughout the course, just as aspects of theatre may be shared at various points in the course. The theatre component enables students to bring together all of their learning in drama and theatre by developing a theatre piece or script. The course engages students in "collective creation"—the development of original scripts by students through research, discussion, and improvisation.

This course satisfies the compulsory fine arts credit requirement.

Drama 11 (academic, 1 credit)

Course Code: 004167

Drama 11 builds on learning experiences provided in Drama 10 and focusses on the students' personal development. Beginning with foundation experiences to develop student confidence and capability, the course allows students to explore movement and speech and to combine these in a greater range of dramatic forms. Selected dramatic forms are explored in depth for presentation.

Drama 11 emphasizes the process of creating script and bringing script to production. Students will create original scripts or theatre pieces from other texts. They will also explore script, using improvisation and other dramatic forms both to understand the original text and to create new script for performance.

The course also explores the elements of theatre production and the skills required for presentation or performance. Students will make and incorporate artistic choices regarding design elements, particularly with regard to lighting and sound, stage movement and blocking, and costume. Available technology will be used to facilitate the creation and production of a theatre piece.

This course satisfies the compulsory fine arts credit requirement.

Music

The music education program is designed to provide a balanced, sequential, broad musical experience from primary through grade 12. The aim of the music program is to develop the student's aesthetic response, musical discrimination, and understanding of as many as possible of those diverse elements embodied in the term "music." At all grade levels, music activities should form an integral part of as many aspects of the total education program as possible.

Elementary (Primary–Grade 6)

NOTE: A new curriculum is being developed in 1999-2000; it is expected that this curriculum will be piloted in 2000-2001.

Primary–Grade 4

The music program primary to grade 4 is outlined in the guide *Music—Primary to Four*. Music involves many of the senses simultaneously, through continuous and active participation. All music classes should contain opportunities for music making. The program should also provide students with ample opportunity to make their own music and to learn about and respond to the music of others. Experiential learning in music develops psychomotor, intellectual, and verbal abilities, as well as musical ability. This holistic learning process also fosters self-esteem and promotes respect for others.

This program is particularly effective when the music teacher collaborates with other teaching staff. The involvement of community musicians also enhances the program.

Grades 5 and 6

There are no official guidelines at present for music at the Grade 5 and 6 levels. Teachers should refer to *Authorized Learning Resources*. The songs, activities, projects, and listening repertoire included in any of books 4, 5, or 6 of any currently listed series contain sufficient material to challenge most classes. The program offered to students should include opportunities for significant and sequential learning, providing a balance of components: creative/productive (making music through performance and

composition), cultural/historical (learning about music), and critical/responsive (responding to music—both their own and that of others).

Junior High (Grades 7-9)

Music is an elective course at grades 7, 8, and 9. Music instruction should be given its own time slot during the regular school day. It should not conflict with other courses in the student's program.

The junior high school music program is sequential, developmental, and cumulative. Students will be able to perform, interpret, and create music through the study of the basic musical concepts of rhythm, melody, harmony, form, and expression. Details of all aspects of the program may be found in the guidelines *Junior High School Music* (1992).

The program involves the cognitive, psychomotor, and affective domains, the last being particularly important. The practical component of the music program helps students perform with accuracy, precision, understanding, and feeling; it encourages an awareness of aesthetic values through direct experience with high-quality music.

Senior High (Grades 10-12)

NOTE: A new music curriculum for grades 10 to 12 is being developed in 1999-2000.

The high school music program comprises four courses: Music 10, Music 11, Canadian Music Studies 11, and Music 12.

The intent of the high school music program is to engage students in creative, expressive music-making processes, providing a firm foundation in skills, principles, and practices of music, and preparing students for lifelong learning in music.

All music courses include performance (either instrumental or vocal), theory/harmony, ear-training, and history (including contemporary styles). Opportunities to explore music composition, often with the use of computers, are also important. Details of courses for each grade level may be found in the *Senior High School Music* guides (1990).

Although all music courses are open to all students, it should be noted that certain skills—especially performance and perceptual skills—are sequential. The music teacher and/or the school administration, the student, and the student's parents/guardians should confer before the student enrolls in a music course.

Music 10 (academic, 1 credit)

Course Code: 009004 (10)

009096 (Instrumental Band 10)

009099 (Instrumental Strings 10)

009102 (Vocal 10)

Music 10 comprises the following components:

Performance

- technical requirements (see *Senior High School Music*, 1990)
- solo and ensemble literature
- instrumental (band or strings) or choral performance

Theory

- rudiments
- all major scales, key signatures, treble and bass clefs, pentatonic scales
- musical terms and signs
- (optional) composition—melodic, employing pentatonic and major (diatonic) scales, usually one or two phrases of the question-and-answer type
- ear-training and dictation
- simple form—ab, aba, rondo

History—The emphasis is on the Classical and Baroque periods.

This course satisfies the compulsory fine arts credit requirement.

Music 11 (academic, 1 credit)

Course Code: 009005 (11)

009097 (Instrumental Band 11)

009100 (Instrumental Strings 11)

009103 (Vocal 11)

Music 11 comprises the following components:

Performance

- technical requirements (see *Senior High School Music*, 1990)
- solo and ensemble literature
- instrumental (band or strings) or choral performance

Theory

- review of grade 10 requirements
- rudiments
- melodic transposition
- overview of ecclesiastical modes
- orchestral score readings
- more extended composition, using more than two phrases and adding a second part
- rhythmic, intervallic, and melodic dictation, as in Grade 10
- form—fugue, sonata, theme, and variation

History—The emphasis is on the Romantic period.

This course satisfies the compulsory fine arts credit requirement.

Canadian Music Studies 11 (academic, 1 credit)

Course Code: 009072

Although Canadian Music Studies 11 is open to any high school student, those taking this course should have a working knowledge of music. Studies include work in four aspects—folk music, performance, composition and composers, and the music industry—and each of these will be examined in relation to both the music and history of Canada. Although designated as a grade 11 credit, the course may also be taken in grades 10 or 12.

This course satisfies the compulsory fine arts credit requirement.

Music 12 (academic, 1 credit)

Course Code: 009006 (12)

- 009098 (Instrumental Band 12)
- 009101 (Instrumental Strings 12)
- 009104 (Vocals 12)

Music 12 comprises the following components:

Performance

- technical requirements (see *Senior High School Music*, 1990)
- solo and ensemble literature
- instrumental (band or strings) or choral performance

Theory

- completion of work from previous years, plus continuing application of theoretical materials and processes, including a review of chords, triads, and inversions
- continued development of dictation skills
- study of forms particular to the Renaissance period

History—The emphasis is on music before 1600 and since 1900.

This course satisfies the compulsory fine arts credit requirement.

Visual Arts

Elementary (Primary–Grade 6)

Visual arts is part of the core program in grades primary to 6 inclusive. Guidelines for the visual arts curriculum described below will be available in January 2000. This curriculum provides opportunities for all students to make, look at, and reflect upon art as they gain understanding of new and magical worlds. The curriculum outlines a cumulative and sequential learning process designed to stimulate and develop creative and intuitive thought.

The elementary visual arts program provides students with opportunities to interact with sensitivity to and respect for their own art and that of others, to show appreciation for different ways of perceiving and knowing, and to recognize and critically respond to the role of the media in their lives and communities. Students work both independently and collaboratively to solve problems and respond to ideas and experiences by making and examining visual art. Activities might include painting, drawing, sculpting, and weaving, and exploring puppetry, multimedia, printmaking, textiles, and design. Drama, movement, and music may be incorporated as well.

The curriculum emphasizes the importance of learning about and through the arts. While opportunities are offered for on-going, sequential instruction, the curriculum stresses the importance of infusing visual arts throughout the elementary school program. The importance of continuous, reflective conversation and collaborative assessment is also highlighted.

In grades primary to 3, students have opportunities to express personal feelings and ideas through exploration of a variety of materials and techniques and to develop their understanding of the rich variety of art forms that exists across time and culture. The curriculum invites learners to share thoughts, ideas, questions, and points of view as they examine the social, cultural, and historical influences on art work and artists in local and global contexts.

In grades 4 to 6, more sequential instruction in art-making techniques, technologies, materials and equipment enables students to build upon and apply their skills and understandings. Students investigate artists' styles, intentions, approaches, and lives as they refine and articulate their own responses through making and examining art.

Junior High (Grades 7-9)

Art is an elective course at grades 7, 8, and 9. At the junior high level, the art program follows a thematic approach to give structure and order to the various skills, techniques, and processes that are an integral part of any art curriculum. The program is divided into four major concept areas: self, social interaction, environment, and cultural heritage. The program should encompass each of the four concept areas at each grade level. Through this approach, teachers and students can develop a distinctive, yet interrelated understanding and awareness of the value of art in their daily lives.

A total junior high art program should adopt a sequential and developmental approach by which students investigate a range of art media. The media that may be incorporated into the junior high program are the following: drawing, painting, printmaking, photography, ceramics, textiles, sculpture, and architecture. The various media should be explored through the four

concept areas, focussing on visual art as a unique and powerful means of both constructing personal meaning and communicating.

Senior High (Grades 10-12)

NOTE: A new curriculum will be developed in 2000-2001.

The aims of the high school art program include the development of visual perception and awareness; skill and confidence in artistic endeavours; skill in using art materials and in solving problems in the visual arts; and an understanding of art, including the ability to analyse and interpret art history.

Art 10 (academic, 1 credit)

Course Code: 001004

Art 10 concentrates on developing basic art skills and an understanding of the core content of drawing/design, painting, sculpture, printmaking, and art history. Students also work in two of the following elective units: mixed media, pottery, photography, crafts, and fibre/textiles. To help students develop their understanding of concepts in art and to prepare them for future studies in art, drawing/design and art history should be related to every aspect of the year's work.

This course satisfies the compulsory fine arts credit requirement.

Art 11 (academic, 1 credit)

Course Code: 001005

Art 11 continues the concentration on drawing and design and art history (including contemporary art) and further develops skill and ability in the other core components of painting, printmaking, and sculpture. Increased time is suggested for the elective units listed in Art 10 to enable students to acquire greater understanding of the processes involved.

This course satisfies the compulsory fine arts credit requirement.

Art 12 (academic, 1 credit)

Course Code: 001006

In Art 12, the student should have the opportunity to do in-depth work in selected areas of the program. Specialization should be encouraged. Drawing/design and art history are required components, with one additional component to be chosen from painting, printmaking, or sculpture, and another additional component to be chosen from mixed media, pottery, photography, crafts, or fibre/textiles.

This course satisfies the compulsory fine arts credit requirement.

Other Arts Credit Courses**Cultural Industries 11***(academic, 1 credit or ½ credit)*

Course Code: 001055 (11)

001056 (11A)

001057 (11B)

The Cultural Industries 11 curriculum is designed to help students consider the ways they might apply the knowledge, skills, talents, and interests fostered by their learning in arts courses. To extend this learning, Cultural Industries 11 curriculum provides opportunities for students to deepen their understanding of the role of arts in their community and the economy. By exploring the arts and cultural community in Atlantic Canada, students are able to identify the opportunities that are offered by current trends in the cultural industries.

The term "cultural industries" refers to businesses involved in creating cultural products that express ideas or values, provide entertainment, or have a functional or decorative use. Their markets or audiences may be local, regional, or worldwide. People active in this sector include those involved in design, visual arts, live performance, film and video production, sound recording, production crafts, and publishing.

Canada's cultural industries represent a major portion of the Canadian economy and exert a

profound influence on many aspects of Canadian life.

Cultural Industries 11 presents a unique opportunity to take learning beyond the classroom to include the community and workplace. Moreover, it offers students an entrepreneurial experience in the cultural industries.

Teaching Guides*Art, Grades 7-9* (No. 21, 1977)*Art, Grades 10-12* (No. 43, 1979)*Dance 11* (1999)*Drama 10 and Drama 11* (1999)*Music Primary to Four* (No. 76, 1981)*Junior High School Music* (No. 124, 1992)*Senior High School Music (Academic)* (No. 115, 1990)*Senior High School Music (Instrumental)*
(No. 116, 1990)*Senior High School Music (Choral)* (No. 117, 1990)*Canadian Music Studies (CMU 331)* (1985)*Foundation for Arts Education Curriculum*
(Validation draft, 1998)*Cultural Industries 11* (Draft, 1999)*Visual Arts, Grades P-6* (2000)

BUSINESS EDUCATION

NOTE: Business courses and the business education program are under revision.

Business education has two strands: individual business courses and business sequences. Each has a distinct purpose. Individual business courses are designed to contribute to the education of all students, regardless of career plans, and business sequences are intended to prepare students for business and office occupations.

Schools that have business education departments may offer accounting, clerical, and stenography sequences as part of their high school program.

The accounting sequence prepares students for employment in accounting and related business occupations. Instruction develops a basic understanding of modern accounting procedures applicable to single proprietorships, partnerships, and corporations.

The clerical sequence prepares students for employment as clerk-typists, general office clerks, file clerks, office machine operators, receptionists, and other related occupations. Instruction includes computer technology, keyboarding, machine operation, record keeping, filing, clerical routines, and business techniques.

The stenographic sequence prepares students for employment in office occupations that require stenographic skills. In addition to developing proficiency in computer technology, keyboarding, shorthand, and transcription abilities, students should have an opportunity to develop skills in operating business machines and filing, and to learn business practices.

Senior High (Grades 10-12)

Accounting 11 (open, 1 credit)

Course Code: 002001

The aims of the high school accounting courses are as follows:

- ▶ to develop in students an understanding of accounting principles and concepts encountered in business and personal activities
- ▶ to provide a sound foundation for additional study
- ▶ to help students become acquainted with the principles, applications, and importance of data processing in accounting procedures

The following topics are covered in the introductory course: the accounting equation, business transactions, journalizing and posting, the processing of cash receipts and payments, financial statements, and the complete accounting cycle for a merchandising firm.

Accounting 12 (open, 1 credit)

Course Code: 002002

Recommended Prerequisite: Accounting 11

This advanced accounting course deals with more complex transactions and financial statements. Topics include automated accounting systems, payroll accounting, cost accounting, budget accounting, taxation accounting, partnership accounting, corporation accounting, financial statement reporting, and analysis of corporate financial reports.

Business Communications 12 (graduation, 1 credit)

Course Code: 002036

NOTE: This course does not fulfil graduation requirements for a language arts credit.

Business Communications 12 develops effective reading, listening, speaking, and writing skills. Students will review the fundamentals of English usage, compose a variety of business letters and memoranda, and study current trends in business communication. Students may also advance their word processing skills.

Business Organization and Management 12 (open, 1 credit)

Course Code: 002005

The business organization and management course includes the structure of Canadian businesses; principles of management; the functions of marketing, personnel, production, advertising and finance; as well as an overview of current trends in Canadian business management. It presents an overview of the different facets of business organizations in Canada in a managerial context. Emphasis is placed on questions, projects, and case studies. Field trips and simulated management situations are an important part of the course. Students are introduced to the types of environment in which managers must operate.

Business Personnel Development 12 (open, 1 credit)

Course Code: 002008

This business personnel development course replaces the office procedures course. It has been updated to reflect the skills and attitudes needed in the changing work environment.

Business Personnel Development 12 is a compulsory course for grade 12 students in the business education program. It would also benefit other high school students who wish to familiarize themselves with the business environment.

Business personnel development is the key element in any business program for it integrates the learning from other business courses. The course includes modules on professional image development, technical and human resource development, and workplace environment and provides field experience simulations.

Consumer Education 10 (open, 1 credit)

Course Code: 002006

This course introduces students to consumer-related issues. Course content includes the following topics: sources of consumer protection, advertising and the consumer, principles of good buying, investments in housing, money management, and savings and investments.

Data Processing 12 (open, 1 credit)

Course Code: 002007

This course in computer data processing introduces students to the challenging, ever-expanding world of business computing.

The course addresses the three main activities of business data processing: capturing the input data, manipulating the data, and managing the output. Specific topics include the data processing cycle, hardware and software, business records management, and electronic communications.

Practice time will be provided for business applications related to the following areas: accounting, professional word processing, database management, and financial spreadsheet programs.

This course is recommended for any student who would find a course on business and financial computing of value and interest as part of his/her high school program. Data Processing 12 is an eligible technology course to meet graduation requirements.

Law 12 (academic, 1 credit)

Course Code: 012028

The Canadian law course is designed to provide students with a knowledge of law and its function in society and skills and attitudes that will enable students to understand the legal process. Course content includes the Canadian legal system, crimes and crime control, injuries and wrongs, human rights, property rights, promises and agreements, business relations, family relations, and courts and trials. The course may be considered as belonging to either business education or social studies and should be taught by the person best qualified to teach, and most interested in, law.

Business Mathematics 11
(graduation, 1 credit)
Course Code: 002074

Recommended Prerequisite: Mathematics 10 or Mathematics Foundations 10

NOTE: This course does not fulfil mathematics credit requirements for graduation.

The business mathematics course reinforces mathematical concepts and skills by giving students experience in applying them to typical business situations.

Beginning with a review of fundamentals, the course emphasizes a problem-solving approach to such topics as budgeting, financial planning, banking and credit, employee compensation, merchandising transactions, investments, business report analysis, and managerial mathematics. This course stresses the efficient use of the calculator and computer as tools for problem solving.

Record Keeping 10 (open, 1 credit)
Course Code: 002009

The course on record keeping is designed for students who want knowledge of the common business forms for personal use or for clerical activities requiring basic record keeping.

The course enables the student to set up and keep simple records for personal use, family use, a social club, or a very small business. Areas of study include personal record keeping, record keeping procedures, business record keeping, and the basic elements of accounting.

Shorthand 11 (open, 1 credit)
Course Code: 002010

The primary aim of the shorthand and transcription courses is to develop the ability to take dictation and produce mailable transcripts with sufficient speed and accuracy to meet office standards.

Regardless of the shorthand system taught, transcription begins early in the introductory

course so students will learn to accurately transcribe shorthand notes written at the *minimum* rate of 60 words a minute. Students should be able to transcribe the dictation at a minimum rate of 10 words a minute with 95 percent accuracy.

Shorthand Transcription 12
(open, 1 credit)
Course Code: 002011

Recommended Prerequisite: Shorthand 11

This advanced shorthand transcription course emphasizes transcription skills and good work habits. Students learn to

- ▶ take dictation from new material at rates varying from 90 to 120 words a minute, graded on the basis of mailability
- ▶ transcribe at speeds from 15 to 25 words a minute
- ▶ proofread with accuracy

Keyboarding 10 (open, 1 credit)
Course Code: 002298

This keyboarding course introduces the student to the touch keyboarding method, with particular emphasis on correct techniques. It is an elective open to all business and non-business students interested in developing their keyboarding skills. In addition to covering the complete keyboard, the course includes drills on sentences, paragraphs, centring, tabulation, manuscripts, letters, and composition.

Keyboarding 11 (open, 1 credit)
Course Code: 002299

Recommended Prerequisite: A minimum average of 35 words per minute (wpm) with five or fewer errors on at least 3 five-minute timed writings with a normal syllabic intensity.

The aim of this second course in keyboarding is to provide students with the opportunity to acquire an intermediate-level vocational skill. Students are required to

- demonstrate a refinement and development of the technique of keyboarding and a knowledge of machine operation
- demonstrate good quality production and efficient work habits in vocational keyboarding
- produce material with acceptable standards of speed and accuracy for the intermediate level. This keyboarding course may be used to help students acquire skills in word processing

Keyboarding 12 (open, 1 credit)

Course Code: 002300

Recommended Prerequisite: A minimum average of 45 wpm with five or fewer errors on at least 3 five-minute timed writings with a normal syllabic intensity.

The aim of the third course in keyboarding is to provide an entry-level marketable skill. A priority is developing competency in producing mailable word-processed document in accordance with industry standards and expectations.

Word/Information Processing 12 (open, 1 credit)

Course Code: 002095

Word/information processing is designed to help students become proficient users of automated word-processing equipment. Modules include keyboarding, formatting, office organization, orientation, word-processing concepts, skill development applications, decision making, and production.

Word/Information Technology 12 (open, 2 credits)

Course Code: 002070

Word/information processing can be offered at the grade 12 level as a one-credit elective business education course (Word/Information Processing 12, 002095) or as a two-credit course (Word/Information Technology 12, 002070) to meet the word/information processing program requirements. It is recommended that students entering either of these courses have completed one level of keyboarding.

Word/Information Processing 12 and Word/Information Technology 12 are eligible technology courses for graduation requirements.

One-Year Business Education Program

NOTE: Students must have accumulated a minimum of 10 high school credits to enrol in the one-year business education program.

The one-year business education program offers two options addressing the technological innovations of the workplace—the Accounting Program and the Word/Information Processing Program. Students may choose one of the two.

The courses for each option are as follows:

Accounting Program

Business Communications
Business Mathematics
Business Personnel Development
Data Processing
Accounting (2 credits)

Word/Information Processing Program

Business Communications
Business Mathematics
Business Personnel Development
Accounting
Word/Information Technology (2 credits)

Teaching Guides

Accounting (No. 54, 1980)
Business Communications (No. 66, 1980)
Business Organization and Management (No. 62, 1980)
Business Personnel Development/Academic 12 (No. 119, 1990)
Business Mathematics (No. 83, 1984)
Consumer Education (No. 25, 1977)
Law in High School (No. 10, 1978)
Recordkeeping (No. 56, 1980)
Shorthand and Transcription (No. 57, 1980)
Word/Information Processing/Academic 12 (No. 120, 1990)

ENGLISH LANGUAGE ARTS

One of the major aims of the schools of Nova Scotia is to produce graduates who are thinking, articulate, literate people. It is expected that graduates will be able to communicate effectively and confidently in personal and public contexts for a variety of purposes and through a variety of means and media and that they will be comfortable using language to explore and construct meaning.

Throughout their school career, students should expand and extend their repertoire of language strategies and skills for learning and for communication. While language experiences in all subject areas contribute to the multifaceted development of students as language users, the English language arts program, in particular, expands the communication potential of all students.

The program should provide a range of learning experiences engaging students in the purposeful use of language to

- ▶ think and learn
- ▶ communicate effectively and clearly with a range of audiences for a variety of purposes
- ▶ gain, manage, understand, and evaluate information
- ▶ explore, respond to, and appreciate the power of language and the contexts of its use

Students need not only to develop skills and strategies as language users but also to reflect on the learning process. The English language arts program, like other curricular areas, must provide abundant opportunities for students to learn *how* to learn. By being attentive to and talking and writing about their own learning strategies, students can develop a sense of themselves as flexible, resourceful learners and provide their teachers with valuable insights into their development and needs.

Speaking and Listening

Speaking and listening are essential for language development, for learning, for relating to others, and for effective participation in society. The

English language arts program should develop students' understanding and effective use of oral language and enhance their capacity to express themselves in formal and informal situations, adapting style and response to audience and purpose.

It is important that students learn to

- ▶ use talk in small and large groups to explore, extend, clarify, and reflect on their thoughts, ideas, feelings, and experiences
- ▶ communicate information and ideas effectively and clearly
- ▶ interact with sensitivity and respect, considering the situation, audience, and purpose

Focussed small group talk is an essential element of English language arts classrooms. In balance with large group and individual learning experiences, the program emphasizes a variety of paired and small group activities in which students may practise and develop their language fluency.

In addition to promoting group interaction and collaborative learning experiences, the program must provide ample opportunities for students to develop an understanding of the structures and conventions of more formal speaking and listening contexts and to explore ways in which oral language varies according to situation.

Reading and Viewing

Reading and viewing graphic and visual messages are meaning-making processes. They include making sense of a range of representations including print, film, television, technological, and other texts. Reading print texts has always been an essential component of the English language arts program and of other disciplines and is becoming increasingly important in a complex, global, information-based, technical society.

It is important that students learn to

- ▶ use the various cueing systems (pragmatic, semantic, syntactic, and graphophonic) and a range of strategies to construct meaning

- ▶ read and view, with understanding, a range of literature, information, media, and visual texts
- ▶ interpret, select, and combine information using a variety of strategies, resources, and technologies
- ▶ respond personally and critically to a range of texts, applying their understanding of the relationships among language, form, purpose, and audience

Using Print Texts

To help students become better readers, learning experiences should reflect the belief that reading must be meaning-centred, interactive, practised, purposeful, modelled, and supported.

In addition to providing focussed instruction and explicit demonstration of reading strategies, teachers need to provide opportunities for students to think and talk about how they construct meaning as they read and to pay close attention to the strategies they use to do so. It is crucial that teachers provide opportunities for students to read widely and frequently so that they will achieve fluency.

A balanced reading program includes the following components at all levels:

- ▶ modelled reading
- ▶ reading aloud
- ▶ shared reading
- ▶ guided reading
- ▶ independent reading
- ▶ opportunities to read books and other materials for pleasure
- ▶ opportunities for personal response
- ▶ opportunities for critical response

The broad range of literature read in English language arts includes classic and contemporary texts in a variety of genres, including poetry, plays, novels, short stories, essays, biographies, and autobiographies. In addition to texts relevant to the students' own lives, the range of texts should offer perspectives that contrast with their own experiences and invite readers to reflect critically on alternative ways of knowing and being. While it is important that learners study some works in detail, a key goal of the reading

program is that students enjoy literature and explore diverse works independently.

Using Information, Media, and Visual Texts

Students live in a culture increasingly dominated by images, both moving and static. The English language arts program has a significant role to play in helping students to select, assimilate, evaluate, and control the immense amount of information and the diverse messages produced in this culture. At all levels, the program must include experiences that enable students to interpret, evaluate, use, and create information, media, and visual texts and to become discerning and critical consumers of mass media and popular culture.

Graphic and visual messages exert a powerful influence in an increasingly high-tech society, and students need to learn how the form, style, and language of visual texts communicate and shape ideas and information. For this reason, the program includes experiences that help students to interpret visual texts, such as illustrations, charts, graphs, electronic displays, photographs, narrative and documentary films, and videos.

Writing and Other Ways of Representing

Writing is a complex developmental process involving a sophisticated set of skills that evolve slowly and unevenly throughout school. These skills are continually strengthened, refined, and extended through use and application. Teachers should enhance students' development as writers by structuring a wide variety of writing experiences and by providing encouragement.

It is important that students learn to

- ▶ use writing and other ways of representing to explore, clarify, and reflect on their thoughts, feelings, experiences, and learning and to use their imagination
- ▶ create texts collaboratively and independently, using a variety of forms for a range of audiences and purposes
- ▶ use a range of strategies to develop effective writing and other ways of representing and to enhance their clarity, precision, and effectiveness

Using writing as a thinking tool is an important component of the language arts program and of other disciplines. It is important that teachers provide abundant opportunities for students to use expressive writing as well as transactional and poetic writing. Students should be provided opportunities to write daily.

Learning through Drama

Drama can be a powerful medium for language and personal growth and should be an integral part of the interactive language arts program. Teachers should use drama to enhance learning in a variety of ways that include the following:

- ▶ as a collaborative social activity that allows students to explore ideas through improvisation and role play
- ▶ as a response to literature and to media texts
- ▶ as a vehicle for involving students in decision making, problem solving, verbal interaction, mime, movement, and group dynamics
- ▶ as a springboard for language exploration through role play that allows learners to use language outside their normal range
- ▶ as an opportunity for learners to try on roles to explore identities
- ▶ as a way to explore voice and point of view by writing "in role"
- ▶ as a springboard for written reflection in or out of role
- ▶ as a medium for "out-loud" thought

Drama fosters language growth across the spectrum of experiencing, expressing, and performing. Improvised drama encourages learners to make discoveries using their own language; reading aloud can help learners make discoveries using the language of others. Interpreting or performing text through role play, movement, improvisation, shared reading, Readers Theatre, scriptwriting for a specific medium and other forms of dramatization can enhance students' language growth and help them to acquire an understanding of self, of their relationship to others, and to the world of ideas.

Using Language across the Curriculum

Language is central to all learning; growth in language learning is facilitated by active involvement in experiences that are meaningful

and purposeful. Thus language growth both fosters and is fostered by learning in other areas of the curriculum.

Elementary (Primary-Grade 6)

Through the elementary English language arts program, students become effective users of language for learning, for communication, and for enjoyment. The language arts program engages children in experiences that develop all the language processes: talking and listening, reading and viewing, writing, and representing in other ways. Always, the focus is on meaning.

The program is language-based, collaborative, and interactive. Through the various language processes, children develop their ability to refine their thinking and build their understanding of the world. Children need opportunities to use language for a variety of purposes: planning, speculating, predicting, organizing, storytelling, sequencing, interviewing, questioning, persuading, reporting, reasoning, criticizing, and evaluating.

Learning Experiences

The elementary English language arts program must provide abundant opportunities for learners to

- ▶ use language skills, processes, and knowledge for pursuing their own questions and for learning about topics that are useful and interesting to them
- ▶ use language to solve problems and articulate with issues that concern them
- ▶ use a range of print and non-print media to collect and convey information
- ▶ comprehend and analyse visual information and apply it to new situations
- ▶ pose questions as they read, listen, and view
- ▶ read, view, and create many different kinds of texts that draw on their imaginations
- ▶ select and use the appropriate set of language conventions for particular situations
- ▶ reflect upon how they learn and use language
- ▶ reflect on their growth as readers and writers

Speaking and Listening

A balanced language arts program provides children with abundant opportunities to develop

oral language skills as they interact with their peers and engage in structured speaking activities within the classroom. By the end of grade six, students will be expected to engage in productive discussion, making thoughtful, constructive contributions, listening critically and respectfully to the contributions of others, asking appropriate questions for clarification, and defending their own ideas with supporting evidence.

Reading and Viewing

The language arts program provides children with experiences that enable them to see themselves as successful readers and to value reading. Children require access to texts that they can read easily and that reflect their interests and language as well as texts that challenge them to increase their fluency. Explicit reading instruction is essential in assisting children to develop a full range of reading strategies. A wide variety of visual texts is also essential, both as supports for print texts and as texts in their own right.

By the end of grade six, students are expected to select and be able to read texts appropriate to their interests and learning needs. They are expected to have achieved a degree of independence in the use and integration of the pragmatic, semantic, syntactic, and graphophonic cueing systems and to be able to use and reflect on a variety of strategies to construct meaning both in literary and information texts. They are expected to respond both personally and critically to texts, demonstrating an understanding of the conventions of a variety of print and media texts and genres, and applying a growing range of strategies to analyse and evaluate texts for their purposes.

Writing and Other Ways of Representing

It is important that children see themselves as writers from their very first experiences and that teachers view learners' attempts in writing as developmental. Because many concepts important for reading are effectively learned through writing, experiences in which learners explore writing should be planned early in primary. Over time, learners should demonstrate increasing fluency, refinement, control, and effectiveness, as well as increasing awareness of the conventions of written language. Children should learn to use

writing as a thinking tool, as well as a means to communicate their ideas, and should have numerous opportunities to write every day so that their competence as writers can grow. As well, children need opportunities to use a variety of media, such as visual representations, drama, and dance to express thoughts or ideas and to convey information.

By the end of grade six, learners are expected to use a range of writing and presentation strategies in an increasing number of forms for a variety of purposes. In their production of written and media texts, they are expected to make informed choices in language that reflect their understanding of audience and purpose, enhance meaning, and achieve specific effects. Learners are expected to perform research writing tasks involving from three to five sources. They are expected to demonstrate a growing understanding of the conventions of written language and a commitment to bringing selected pieces of writing, as well as other representations, to final product.

Junior High (Grades 7-9)

The junior high program is language-based, collaborative, and interactive. The program is characterized by instruction that balances content and process with attention to developing students' knowledge, skills, and motivation.

Students' knowledge about language should be developed in the context of language in use, not through isolated exercises. The language arts program is an integrated program that treats skills as elements of processes and processes as elements of communication. The focus of the program is on enhancing students' communication capabilities. More than half of the time allotted to language arts should be spent on reading and writing activities.

The program should provide opportunities for all students to use communication, information retrieval, and information-processing technologies. Students should also make optimal use of community and school resource centres/libraries and the variety of resources they offer.

It is important that language arts classrooms provide a wide variety of reading resources that address the interests and needs of learners at each grade level. Resources should be available to support developing readers and readers whose fluency is beyond the expectation for the grade.

The junior high program emphasizes

- ▶ using talk as a tool for thinking and learning
- ▶ writing, reading, and talking about writing and reading
- ▶ using language within the context of drama
- ▶ exploring visual images and ways in which written and spoken language combine with image in visual media
- ▶ extending personal and critical responses to literature and media texts

Learning Experiences

The junior high English language arts program

- ▶ accommodates young adolescents' diverse needs and interests
- ▶ provides multiple opportunities for students to use exploratory talk and writing
- ▶ encourages increasingly sophisticated responses to reading and viewing experiences
- ▶ extends students' appreciation of literature and media texts
- ▶ develops students' awareness of their own language use and that of others in terms of its appropriateness to context, purpose, and audience
- ▶ extends students' understanding of the structures and conventions of standard English
- ▶ develops students' knowledge of terms to describe language and the way language functions in communicating meaning
- ▶ develops students' critical awareness of the ways language can reflect bias and create or reinforce gender, ethnic, or cultural stereotyping
- ▶ develops students' critical thinking, particularly in relation to reading and viewing

Study Skills and Strategies

Skills and strategies for writing and reading learned in the elementary grades are further developed in the junior high English language arts

program. Teachers should help students understand that strategies learned for writing and reading one kind of text do not necessarily work with all texts; different purposes for writing and reading require different approaches.

Useful study skills and strategies include the following: clustering/webbing to stimulate thinking; predicting; skimming; highlighting; underlining; note-making; rereading; paraphrasing; summarizing; looking for relationships; using graphic organizers; creating charts and semantic maps to organize information; using reference materials; using textual aids; using context clues; reading charts and diagrams; and locating, comprehending, and interpreting written information in manuals, tables, graphs, and schedules.

The English language arts program provides learners with explicit reading instruction to develop strategies for

- ▶ reading with a purpose
- ▶ drawing upon their prior knowledge, connecting new items to items in their store of prior knowledge, and reconsidering and organizing new information in relation to their own prior knowledge
- ▶ using the pragmatic, syntactic, semantic, and graphophonic cueing systems together
- ▶ monitoring comprehension, focussing on meaning and checking themselves to see if they are understanding
- ▶ adjusting their reading rate and approach, depending on purpose
- ▶ resolving a lack of understanding, for example, rereading a portion of the text, reading on to gather additional information, using phonics knowledge to sound out a problematic word, consulting another source
- ▶ generating questions before and during reading
- ▶ identifying important concepts and recording important information about those concepts
- ▶ considering information and ideas from alternative perspectives

Knowledge about Language and Its Use

In addition to providing opportunities for experimentation and exploration, the junior high

English language arts program should include opportunities for learners to study language arts as a formal discipline, to talk about specific ways in which authors craft powerful pieces of writing, and to reflect upon how authors use language.

The program emphasizes language skills of a public and social nature taught not in isolation but in real communicative and problem-solving situations. These situations require students to use language to persuade, encourage, express appreciation, argue, compare, contrast, explain and defend judgments, debate, illustrate, resolve conflicts, describe, explain, report, extend an invitation, tell a story, summarize, generate questions, or clarify meaning.

Learning experiences should enhance students' understanding of and proficiency with standard usage, including awareness of dialects and registers; levels of usage and diction; appropriate word forms; effective sentence structure; and standard spelling, punctuation, and capitalization.

As students progress, focussed learning experiences in appropriate contexts should increasingly enable students to acquire a facility with language conventions and an awareness of appropriate use of these conventions. Teachers and individual students should identify particular language needs when they set learning goals.

The junior high English language arts program builds on the outcomes achieved by the end of grade six. By the end of grade nine, students are expected to articulate viewpoints in a convincing manner in speaking situations, providing appropriate support. They are expected to ask relevant questions calling for elaboration, clarification, or qualification as they examine the ideas posed by others and listen critically to assess the adequacy of the responses they receive. They are expected to participate constructively in conversation, small and whole group discussion and debate, using the appropriate strategies which contribute to effective talk, adapting their rate of speech, vocabulary, and sentence structure to the occasion. Learners at this stage are expected to recognize the effects of verbal and non-verbal features of language situations and show an understanding that oral language has different

conventions in different situations and cultures. They are expected to demonstrate awareness of the power of spoken language to influence and manipulate and to reveal ideas, values, and attitudes.

By the end of grade nine, learners will, in addition, have read widely from a range of young adult literature, as well as literature from other parts of Canada and other countries. They are expected to use a variety of reading strategies as they read and view texts of increasing complexity. They are expected to show an understanding that information texts serve specific purposes and be able to access independently those texts required to meet their learning needs. They are expected to respond to texts in increasingly sophisticated ways as they express and support their points of view and critically evaluate texts to assess their purpose, relevance, reliability, and to identify the values inherent in them.

By the end of grade nine, learners are also expected to use a range of strategies in writing and other ways of representing to reflect, to explore and extend their thinking, and to describe their learning processes and strategies. They are expected to demonstrate effective note-making strategies and to use a variety of information sources to construct new texts. Their choices of language, form, style, and content should show an awareness of audience and purpose. They are expected to demonstrate facility in using a variety of forms of writing and other ways of representing and to understand the processes used to create these products. Their final written products should show consistent use of the conventions of written language.

Senior High (Grades 10-12)

The senior high English language arts program builds on the competencies students attain in the program from primary to grade nine. The focus is on balanced instruction in the three strands: speaking and listening, reading and viewing, and writing and other ways of representing. The underlying ideas of the program for grades 10 to 12 centre on students' purposeful use of the language processes to

- ▶ think and learn
- ▶ communicate effectively and clearly with a range of audiences for a variety of purposes
- ▶ gain, manage, and evaluate information
- ▶ explore, respond to, and appreciate the power of language, literature, and other texts, and the contexts in which language is used

At all levels, the program should provide learners with abundant opportunities to explore a wide variety of literary texts and visual representations, as well as texts that reflect their interests. The English classroom should provide resources for developing readers as well as learners whose reading needs require sophisticated texts. Learners may require explicit instruction in reading strategies to assist them in accessing the more challenging literary and information texts of the senior high grades. Students should also be given abundant opportunities to write during English classes, using language to think and reflect on their learning as well as to create texts of their own.

By the end of grade 12, students' use of language should reflect sophistication, competence, and maturity.

All students must take English 10 in their first senior year, the foundation year of the senior high English language arts program. During their second year, students may take either English 11 or English/Communications 11, and in their final year, either English 12 or English/Communications 12. Students enrolled in English and English/Communications work toward achievement of the same grade level outcomes; however, the courses differ in pace, scope, emphases, and resources. It should be noted that the learning experiences offered to students enrolled in English/Communications 11 should be flexible enough to allow them to enter English 12 if they choose.

English 10 (academic, 1 credit)

Course Code: 004084

English 10 offers learners an opportunity to consolidate their learning from their junior high years before they specialize in grade 11. The

English 10 classroom offers abundant opportunities for students to read widely, to write frequently, to explore a wide range of print and visual texts, to work independently as well as collaboratively in small groups, and to design learning tasks that are of particular interest to them.

English 10 emphasizes proficiency in using oral language for a variety of purposes. Learning experiences include the following:

- ▶ exploratory and informal talk: conversation, focussed discussion with an identifiable purpose, such as brainstorming, speculating, and problem solving
- ▶ structured activities, including symposia, panels, and interviews
- ▶ dramatic representations: monologues, role playing, and improvisation
- ▶ performance of texts: individual and choral performance and Readers Theatre
- ▶ formal presentations: seminars, debates, public speaking, and reports
- ▶ focussed listening activities to interpret and evaluate ideas and information from a range of sources

The learning environment for English 10 must be flexible enough to accommodate a wide range in students' backgrounds, abilities, and interests. Within the confines of language, literature, and media texts, students are encouraged to explore topics of interest to them, with the goal of meeting their specific needs and interests and growing toward autonomy. This range of learning experiences enables students to reflect on their own learning strategies as they become independent learners.

English 11 and English 12 (academic, 1 credit each)

Course Codes: 004162 and 004165 respectively

English 11 and English 12 are intended for students whose goals include post-secondary study. While these courses emphasize literary texts, students should be provided opportunities to select their own texts for independent study and small-group inquiry. In designing learning experiences, teachers should consider ways that

students can extend their knowledge base, thinking processes, learning strategies, self-awareness, and insights. Students should also be provided opportunities to use the curriculum outcomes framework to design their own learning experiences that they may undertake individually or with learning partners.

Learning experiences should enable students to

- ▶ study and give detailed accounts of complex and sophisticated texts and issues
- ▶ be perceptive and analytical in making sophisticated adult judgements
- ▶ be critical readers of literary texts
- ▶ be critical viewers
- ▶ express themselves precisely when writing for often complex purposes
- ▶ be capable editors of their own and others' writing
- ▶ communicate confidently and effectively in the formal style and language required by some situations
- ▶ demonstrate control of language processes

The learning environment for English 11 and English 12 must provide opportunities for students to work in a variety of grouping arrangements, including both mixed-ability and similar-ability co-operative learning groups, interest groups, and partner learning.

*English/Communications 11 and
English/Communications 12
(graduation, 1 credit each)*

Course Codes: 004163 and 004164 respectively

English/Communications courses are intended for students who may need additional support in their development as readers, writers, and language users. English/Communications courses are intended to prepare students for lifelong learning by engaging them in practical and interesting learning experiences closely related to their lives and to the world they will experience as adults. These courses should be based on the interests and abilities of the students and provide support to meet their individual and diverse learning needs. At the same time, English/Communications courses should be flexible enough to allow learners to move to academic courses.

These courses focus on developing language skills necessary for the workplace. It is important that learners have abundant opportunities to engage in small group and whole class activities that help develop their speaking and listening skills. Learners must also have opportunities to read widely in their interest areas and to create both written and visual texts to enhance their reading and writing fluency.

English/Communications courses are intended to provide experiences that enable students to

- ▶ use language to reflect on their experiences
- ▶ think critically about the range of issues and ideas they encounter in texts
- ▶ understand the impact of media texts in their lives
- ▶ explore a range of print and visual texts
- ▶ meet the literacy demands of the outside world
- ▶ be aware of ways language can entertain, inform, and influence others
- ▶ adapt their language to suit their purposes
- ▶ extend their thinking through exploring a range of issues

The learning environment for English/Communications courses requires a variety of grouping arrangements that allow optimum opportunities for meaningful teacher-student and student-student interaction.

*Technical Reading and Writing 11
(academic, ½ credit)*
Course Code: 004216

NOTE: Technical Reading and Writing is an elective half-credit course that consists of practical language activities. It does not fulfil the compulsory English language arts requirement.

Technical Reading and Writing 11 is designed for students who are planning post-secondary studies in science, technology, or engineering, as well as students who expect to train in industrial vocations such as carpentry, plumbing, or electrical work. The course centres on practical language activities related to skills and attitudes required in technical workplace situations. Students will gain an understanding of the

importance of precision in technical communications.

Learning experiences should enable students to

- ▶ read and interpret written and visual technical text, applying appropriate strategies and responding in ways that indicate understanding
- ▶ produce effective technical documents with both print and visual components
- ▶ employ a variety of technologies to create and present technical documents
- ▶ collaborate and consult effectively with others, as well as work independently, in completing technical communications tasks
- ▶ speak and listen effectively in whole class, small group, and presentation contexts

Canadian Literature 12 (academic, 1 credit)

Course Code: 004166

NOTE: Canadian Literature 12 is an elective credit course and does not fulfil the compulsory English language arts requirement. This revised course is based on the framework provided by the Atlantic Canada Essential Graduation Learnings and the *Foundation for the Atlantic Canada English Language Arts Curriculum*.

Students who wish to take an additional senior English course may take Canadian Literature 12 in addition to English 12.

Canadian Literature 12 is available as a full- or half-credit course. It has been developed in a modular structure and consists of the following four modules: Atlantic Canadian Identity (a compulsory module); Cultural/Regional Perspectives; Focussed Study (this module can be taken more than once), and Canadian Voices. Students may earn a full credit with the successful completion of four modules. A half-credit comprises a minimum of two modules. Canadian Literature 12 provides opportunities for small group and independent learning, as well as a wide range of choices in literature, according to the interests of learners.

This course provides opportunities for students to become acquainted with a broad range of Canadian literature, to appreciate the rich literary heritage of Canada, and to reflect upon their understanding of the Canadian identity, community, and culture. Students should understand that Canada has its own complex but distinctive literary tradition.

Teaching Guides

Foundation for the Atlantic Canada English Language Arts Curriculum (1996)

Using What We Have Learned: A Professional Development Resource for Elementary Language Arts (1997)

Using What We Have Learned: A Professional Development Resource for Senior Language Arts (1997)

The Supportive Classroom: Literacy for All (1991)

Everything That Counts: Portfolio Assessment in the Junior High School (1994)

English Language Arts, Grades Primary-3 (1997)

English Language Arts, Grades 4-6 (1997)

English Language Arts, Grades 7-9 (1997)

English Language Arts, Grades 10-12 (1997)

Canadian Literature 12 (1998)



ENTREPRENEURSHIP EDUCATION

Atlantic Canada's economy is becoming more diversified and requires a greater emphasis on entrepreneurship global competitiveness and sustainable development. One of the challenges of the public school program is to offer students experiences that will help them respond to opportunities to participate in the economy. Students need to be aware of such opportunities, to become more flexible in their outlook, and to develop entrepreneurial spirit and initiative.

The essence of entrepreneurship is taking action. Entrepreneurship involves developing ideas for business, learning the processes of becoming an entrepreneur, and initiating, developing, and owning a business.

Entrepreneurship education

- ▶ allows students to move along a continuum from aspiration to business start-up to expansion
- ▶ focusses on personal qualities, characteristics, and attitudes that allow entrepreneurs to adjust successfully to new situations
- ▶ develops specific knowledge to ensure informed decision making
- ▶ emphasizes an experiential, learning-by-doing approach
- ▶ includes five specific pathways to success: peer group learning, mentoring, experiential learning, personal planning, and specific content knowledge

Elementary (Primary-Grade 6)

During elementary school years, entrepreneurship education emphasizes the development of personal qualities, characteristics, attitudes, and skills and provides diverse opportunities for students to explore and experiment with entrepreneurship and enterprise. Learners are encouraged to initiate and develop their own solutions to problems and to see possibilities for entrepreneurship and enterprise in their communities. Teachers of grades 4 to 6 may wish to use the resource *Pathways to Enterprise* (1996) to help them integrate entrepreneurship education into their instructional program. *Pathways*

describes learning activities designed to enhance curriculum, to enrich learning, and to encourage children to become more aware of career options.

Junior High (Grades 7-9)

As students move through junior high school grades, more emphasis is placed on transferable skills. Students build on the enterprising attitudes and characteristics they have developed and add the skills as well as specific knowledge associated with entrepreneurship. The junior high program allows students to participate actively in experiential learning.

The teaching resource *Connections: Learning through Entrepreneurship across the Curriculum* provides teachers with ideas to facilitate the incorporation of entrepreneurial thinking into the existing curriculum at the junior high level.

Senior High (Grades 10-12)

At the senior high school level, entrepreneurship education focusses on the personal qualities, characteristics, and attitudes; transferable skills; and specific knowledge associated with entrepreneurship.

A teaching resource, *Entrepreneurship in the Cultural Industries*, has been developed specifically for arts educators. This resource provides teachers and students with a range of developmental experiences that connect arts education to entrepreneurship education.

Cultural Industries 11, a new course under development, provides further opportunities for students to explore entrepreneurship in the cultural industries. (See "Other Arts Credit Courses" in Section E.)

Entrepreneurship 12 (academic, 1 credit)

Course Code: 002098

Entrepreneurship education is fundamental to advancing the vision of a strong entrepreneurial climate. The curriculum guide and support materials for Entrepreneurship 12 describe a "cutting-edge" course that introduces entrepreneurship as a viable career option. Students recognize that they can create their own

opportunities and enjoy more control over their destinies.

Entrepreneurship 12 focusses on active, experiential learning and on developing the attitudes, skills, and knowledge required to meet the many opportunities and challenges of being an entrepreneur. The course comprises three components: action, theory, and business planning.

Students apply what they learn to organize, operate, and manage activities/ventures in four strategic areas

- ▶ school-based activities
- ▶ business venture(s)
- ▶ community-based learning
- ▶ mentoring

As well as the 110 hours of classroom time, students are expected to complete a minimum of 50 hours of entrepreneurial activities outside the classroom.

Teaching Guide

Entrepreneurship 12 (1995)

FAMILY STUDIES

The central purpose of the family studies program is to enhance the quality of life for individuals and families in Canada and throughout the world. In this program, students are encouraged to identify, clarify, examine, and deal with significant concerns they encounter in their daily lives. They are given opportunities to make reasoned and sound judgments as they consider their decisions in terms of consequences to self, family, and society.

Teachers should encourage students to forge links between theory and practice, that is, between the content and learning processes used in the classroom and the significant problems students encounter in their everyday lives. Teachers can help forge those links in the following ways:

- ▶ by recognizing that the needs of learners differ according to their maturity, developmental stage, ability level, and learning style and by adapting the lesson content and learning activities to meet these differing needs
- ▶ by helping students become engaged in dialogue and discussion in which they can explore and discover meanings significant to themselves
- ▶ by providing opportunities for students to engage in a variety of problem-solving activities, both technical problem solving and those requiring interpretation and critique

The *Family Studies* teaching guide offers suggestions for basing the program on "perennial practical problems." These are problems families face in their everyday lives that require decision and action; they recur from generation to generation. "What should be done to provide your family with nutritious meals" is an example of such a problem. Solving perennial practical problems requires reasoned judgment rather than a system of dogmatic beliefs, habits, or unexplained rules.

A systems model may help students identify and clarify practical problems. It explores problems in terms of the relationships among individuals, families, and their social, economic, and political environments. For example, a lesson concerning nutrient intake in children might explore how food habits are influenced by the resources available to

the family from the larger environment, by the family's use of the resources, and by the processes and values the family members use in making decisions.

This model provides a means for understanding the complexity of family problems and the reciprocal relationships between families and society.

Junior High (Grades 7-9)

The junior high family studies program comprises three areas: food and nutrition, clothing and textiles, and individual and family development.

Compulsory modules are designated in the food and nutrition, and clothing and textiles areas. To enable teachers to address diverse student and community needs, a compulsory module is not designated for the "individual and family development" area.

In each area of study, teachers and students are encouraged to include a locally developed module. Recommendations for developing modules are included in the teaching guidelines.

Compulsory and elective modules from each area of family studies form the basis of the three-year junior high program to be developed by teachers within the school and/or regional school board.

Food and Nutrition

The food and nutrition area of family studies is designed to enable the adolescent to understand the basic principles of nutrition. The curriculum for these modules is being revised.

Examining nutritional, cultural, psychological, and social factors helps students develop the capacity to adopt eating patterns and lifestyles that will result in a high level of well-being. Practical applications, including food preparation, knowledge of recipes, equipment use, and safe and efficient food handling will reinforce theoretical concepts.

Modules selected should reflect current food-related issues and concerns as identified by students and the teacher. This foundation will

enable students to evaluate new or conflicting information; to examine the nutritional benefits of various foods, nutrients or food practices; and to make sound personal decisions. Modules include the following: Nutrition and Management Basics (core), Nutrients for Health, Simple Family Meals and Snacks, Fast Foods, Nova Scotia Products and Related Industries, Enjoying Food with Others, Food Safety, Eating Light, Shopping for Family Food, Practical Meal Planning, Native and Multicultural Food Study, Diet for Life, Eating Disorders, and Food and Technology.

Clothing and Textiles

Clothing and textiles modules are built on individual and family clothing choices that are expressions of culture, lifestyle, and socio-economic influences. These modules incorporate the personal management and decision-making skills necessary for acquiring, caring for, and maintaining clothing, recognizing that clothing priorities will vary with individual and family resources and preferences.

The modular approach allows students to focus on practical clothing construction or a consumer-related clothing and textiles exploration study. Modules include the following: Clothing Basics (core), Family Clothing Care, Clothing and You, Fabrics for Clothing, Construction One, Construction Two, Wardrobe Management, Clothing and the Consumer, Clothing Design and Appearance, and Recycling and Redesigning.

Individual and Family Development

The individual and family development area of family studies looks at the family from a systems perspective, recognizing that the family unit interacts with its social, emotional, and physical environments. This course provides students with the opportunity to develop and enhance the skills necessary to manage their present and future family life in a climate of cultural, technological, and social change.

Modules include the following: Communication in the Family, Family Members with Special Needs, Older Family Members, The Global Family, Learning About Children, Early Childhood Development, Child Care Practicum, You and

Your Money, Living Space, The Family and Work, and the Family and Its Resources.

NOTE: Some topics appear in both the family studies and the personal development and relationships program.

In schools where all students take family studies, topics that are common to both programs should be taught in family studies classes. In schools where not all students take family studies, the family studies and personal development and relationships (PDR) teachers should collaborate so that, while the integrity of both programs is maintained, duplication is avoided.

Senior High (Grades 10-12)

NOTE: The curriculum for food and nutrition courses is being revised.

At the high school level, students have the opportunity to further develop the skills in and knowledge of family issues they acquired during the junior high years. They do this through the areas of food and nutrition, clothing and textiles, consumer studies, child studies, housing, and Canadian families.

Senior high family studies address issues of social, political, and economic importance to families. Emphasis is placed on researching issues of social concern, questioning social practices, and being involved in rational argument and debate.

An understanding of community support services for individuals and families enables students to see various issues from a broad perspective. Guest speakers, visits to community agencies and institutions, opportunities to work/volunteer in community settings, or research projects on issues of community concern all help to develop the students' understanding of family issues.

The following courses are electives and do not require prerequisites.

Food and Nutrition 10 (open, ½ credit)

Course Code: 005046

Food and Nutrition 10 enhances students' understanding of the relationship between one's lifestyle and nutritional well-being, helps students apply that knowledge to meal management and wise consumer decisions, and helps students develop an appreciation of one's cultural heritage and its influence on food choices. This course is developed around three modules:

- ▶ Nutrition and Health (adequate nutrition, nutrition and active living, and special concerns in nutrition)
- ▶ Meal Management (food consumerism, lifestyle trends, and technological influences)
- ▶ Food, Culture, and You (Canadian food heritage, international foods, and food and people today)

Clothing and Textiles 10 (open, ½ credit)

Course Code: 005043

Clothing and Textiles 10 enhances students' understanding of the meaning and significance of clothing in their lives, helps students acquire the necessary skills and knowledge for responsible consumerism, and helps students develop an appreciation of the many facets of the clothing and textile industry. This course is developed around three modules:

- ▶ Clothing Dynamics (clothing as self-expression, influences on clothing choice)
- ▶ The Clothing Consumer (clothing decisions, wardrobe planning, clothing resource management)
- ▶ The Clothing Marketplace (the fashion industry, future trends in clothing, occupations in the clothing and textile industry)

Child Studies 10 (open, ½ credit)

Course Code: 005047

Child Studies 10 explores the many roles and responsibilities involved in caring for young children, provides students with practical information on nurturing and interacting with children, and develops in students an appreciation of the importance of nutrition, play, music, and

language in child development. This course is developed around four modules:

- ▶ Caring for Children (parenting decisions, day care for children, child protection)
- ▶ Learning Through Play (stages of play, kinds of play, toy safety)
- ▶ Nourishment for Children (nutrition and the young child, creative meal planning, eating problems)

and either

- ▶ Story Time for Children (exploring children's literature, selecting books for children, telling stories)

or

- ▶ Music for Children (value of music experiences, music and song selection, rhythm and creative movement activities)

Consumer Studies 10 (open, ½ credit)

Course Code: 005066

Consumer Studies 10 helps students develop a realistic understanding of the marketplace and of their rights and responsibilities and helps them develop strategies for making rational consumer decisions. This course is developed around three modules:

- ▶ The Environment of the Adolescent Consumer (adolescent consumers as members of society, the setting for consumer behaviour)
- ▶ The Consumer in Action (personal financial management, consumer protection)
- ▶ Surviving in the Marketplace (physical marketplace, consumer choices, occupational opportunities in consumerism)

Child Studies 11 (open, 1 credit)

Course Code: 005005

Child Studies 11 is a one-year course designed to help students explore the meaning and implications of responsible parenthood; to help them acquire current information regarding reproduction, pregnancy, and childbirth; to help them explore significant issues of early childhood; and to help them apply the

understanding of child development to the care and guidance of children. The course is developed around five modules:

- ▶ Decisions about Parenthood (the decision to become a parent, parenthood alternatives)
- ▶ The Beginning of Parenthood (human reproduction, pregnancy, childbirth, the newborn)
- ▶ Early Childhood Development (the infant, the toddler, the preschooler, the school-age child)
- ▶ Special Concerns in Child Development (day care, children with special needs, children in crisis, support services, occupational opportunities with children)
- ▶ Practical Experiences with Children (an in-school or out-of-school practicum)

Canadian Families 12 (open, 1 credit)

Course Code: 005065

Canadian Families 12 is a one-year course designed to develop an understanding of the nature of families in historical, social, and cultural contexts; to promote awareness of the role played by economics, work, and shelter in maintaining successful families; and to examine the physical, social, and emotional dimensions of family health in adopting a preventive approach to family well-being. This course is developed around three modules:

- ▶ Images of Families (historical perspective, families today, family law, families of the future)
- ▶ Family Development (relationships, family arrangements, parenting, families in later life, death as a process)
- ▶ Family Well-Being (family health, family economics, family and work, family shelter)

Housing 12 (open, ½ credit)

Course Code: 005045

This half-credit course in housing assists students in assessing housing environments to meet family shelter needs, to explore community concerns and support services related to available adequate shelter, and to develop an appreciation of the problems related to national and global shelter. This course is developed around three modules:

- ▶ The Family (family housing needs, family shelter economics, family shelter management)
- ▶ The Community (sheltering in the community, community services)
- ▶ The Globe (global shelter issues)

Clothing and Textiles 12 (open, ½ credit)

Course Code: 005044

This half-credit course in clothing and textiles explores significant factors in making family clothing decisions, helps students recognize the effect of societal attitudes and practices on these decisions, and develops an understanding of the clothing needs of individuals in Canada and other countries around the world. This course is developed around three modules:

- ▶ The Family (clothing as an expression of family lifestyle, family clothing economics, family clothing management)
- ▶ The Community (clothing in the community, community services)
- ▶ The Globe (clothing cross-culturally, the global textile industry)

Food and Nutrition 12 (open, ½ credit)

Course Code: 005051

This half-credit course in food and nutrition develops an understanding of resource management in meeting family food needs, an appreciation of the importance of preventive health care through an exploration of nutrition-related health concerns and community support services, and an awareness of global food issues. This course is developed around three modules:

- ▶ The Family (family food needs, family food economics, family food management)
- ▶ The Community (community food issues, community services)
- ▶ The Globe (global food issues)

Teaching Guide

Family Studies, Grades 7-12 (No. 133, 1993)

FRENCH SECOND LANGUAGE

Core French

The aim of the Core French program is to develop the learner's ability to communicate effectively in French. At all levels, the focus is on a multidimensional curriculum that integrates communicative/experiential, culture, general language education, and language components.

To help students develop their communication abilities, learning experiences in Core French must be relevant to the learner. Teaching materials that explore all domains of students' experiences should be included in the curriculum. These include social, physical, leisure, civic, and intellectual domains.

Culture and general language education should be integrated into every unit. Through this general language education component, students should develop an awareness of language, culture, and language-learning strategies. Language should become progressively more complex and be selected according to the language needs of learners in relation to experiences and activities. Language must be presented and practised in context.

Learners should be exposed to a variety of proficient language models, and French must be the language of the classroom. Daily French instruction and a classroom designated for French are necessary for creating and maintaining an atmosphere facilitating language acquisition. In addition, students must have access to authentic documents.

A variety of teaching strategies, including extensive small group work, is necessary to provide maximum student interaction and collaboration, which develops comprehension, production, and negotiation skills. Assessment strategies should be an integral part of the curriculum and must reflect the components of a multidimensional curriculum.

It is essential that teachers of different grade levels work collaboratively to facilitate students' smooth transition from one level to another.

As a result of their cumulative experiences in the Core French program, by the end of grade 12, students should be able to

- communicate effectively in French and to interact appropriately in a variety of situations related to their interests and needs
- choose and use strategies that help both with communication in French and with their general education
- demonstrate an appreciation of Francophone cultures as well as an appreciation and understanding of Canada's multicultural context
- use certain language items in context to facilitate communication in French in a variety of situations

Elementary (Grade 4–Grade 6)

In French study at the elementary level, students are involved in activities and projects that reflect their interests, needs, and experiences. The content is organized according to the five dimensions of the communicative/experiential syllabus of the National Core French Study: civic, leisure, intellectual, physical, and social. The learning outcomes for each of the components and for the language skills—oral and written comprehension as well as oral and written production—are stated in the multidimensional curriculum. Emphasis at the elementary level is placed on oral comprehension, communication, and interaction; however, reading and writing skills are introduced in context from the beginning of grade 4. Where possible, other subject areas should be integrated.

Evaluation must reflect the multidimensional curriculum, content, and approaches, with meaningful, contextualized, performance-based tasks.

Junior High (Grades 7–9)

In French study at the junior high level, students extend their activities and learning from the elementary years. The program content continues to follow the National Core French Study

syllabus. Emphasis is on using language in context with at least 60% of the learners' time devoted to oral comprehension, communication, and interaction.

Evaluation must reflect the multidimensional curriculum, content, and approaches, with meaningful, contextualized, performance-based tasks.

Senior High (Grades 10-12)

French-Core 10, French-Core 11, and French-Core 12
(academic, 1 credit each)

Course Codes: 007097, 007098, and 007099 respectively

The senior high French program is designed to develop comprehension, communication, and interaction skills and strategies through experiential teaching materials that incorporate a variety of authentic documents. Topics, tasks, and final projects are aligned with students' experiences and interests. Areas to study include the future, career plans, the media, the arts, social and technological trends, as well as Francophone cultures and multiculturalism.

The linguistic component is chosen according to the language needs of learners in relation to the tasks and projects. Emphasis continues to be placed on using language in meaningful communicative contexts. Evaluation must reflect these principles, with a maximum of 25 percent of time spent analysing the form of the language.

Extended Core French

Junior High (Grades 7-9)

A curriculum guide for the language arts course offered in the extended core French program at the junior high level will be developed during the next school year.

Senior High (Grades 10-12)

A curriculum guide for the language arts course offered in the extended core French program at the senior high level will be developed during the next school year.

French-Extended Core 10, French-Extended Core 11, and French-Extended Core 12 (academic, 1 credit each)

Course Codes: 007103, 007104, 007105 respectively

French Immersion Language Arts

The French immersion language arts program is designed to allow students to

- ▶ communicate effectively in French
- ▶ explore alternative forms of expression and representation
- ▶ read and to appreciate a variety of literary forms
- ▶ respond personally and critically to a variety of texts
- ▶ value French language and culture, among others
- ▶ reflect on their experiences and learnings

The outcomes for the French immersion language arts program describe what all students enrolled in French immersion programs should know and be able to do as well as the attitudes they should develop as a result of their experiences in the program. This implies that all students can be successful and learn. However, each child learns at his/her own pace, and language learning does not occur in a linear fashion; it is recursive in nature. Students will arrive at different stages at varying times during their learning process.

Valuing French language and culture constitutes an integral part of all the activities of the French language arts program. In fact, it forms the backdrop of the entire program. As a result of their cumulative experiences in the French Immersion language arts program, students should be able to demonstrate specific outcomes. Specifically, they should be able to

- ▶ demonstrate a positive attitude towards the French language and towards Francophone communities in a national and international context
- ▶ demonstrate an understanding of and a respect for a diversity of cultures

- ▶ demonstrate their understanding of a wide range of texts, depending on the situation and on their individual needs
- ▶ communicate in a variety of situations to respond to their individual needs
- ▶ use appropriate strategies and techniques to facilitate their listening and speaking experiences
- ▶ demonstrate their understanding of a wide range of texts, depending on the situation and on their individual needs
- ▶ use appropriate strategies and techniques to facilitate their reading and viewing experiences
- ▶ demonstrate their understanding of a wide range of texts, depending on the situation and on their individual needs
- ▶ use appropriate strategies and techniques to facilitate their writing and other forms of representing experiences

Elementary (Primary-Grade 6)

The elementary French immersion language arts program was developed according to the principle that language is not only a means of communication but also a vehicle for thought and learning. It is designed to allow students to develop oral, written, and visual skills in an integrated manner by means of authentic and meaningful situations while allowing them to develop their own learning strategies.

Junior High (grades 7 to 9)

Early Immersion

The junior high early immersion French language arts program is currently being developed.

Late Immersion

The junior high late French immersion language arts program is designed to support the language needs of students in other subjects taken in French. The program provides opportunities for students to develop and to enhance their communication skills, to refine their thinking and problem-solving skills and to develop a better understanding of their own language and culture. Students are engaged in a variety of authentic and meaningful situations in which they must give and request information, express their thoughts and opinions, amuse and entertain, as well as satisfy

and use their imagination. By interacting with others, students learn, in context, elements of language that facilitate communication in French.

Senior High (Grades 10-12)

The senior high French immersion language arts program is designed to support the language needs of students in other subjects taken in French. It provides opportunities for students to improve their ability to think and to communicate effectively in French as well as to appreciate and enjoy French language and culture. Speaking and listening are particularly emphasized as these constitute the most prevalent modes of communication in everyday life. However, an increased emphasis is placed on reading and writing through meaningful and varied activities.

Français-immersion 10

(academic, 1 credit)

Course Code: 007106

This immersion course emphasizes using French for a variety of purposes. Students are engaged in listening and speaking experiences that require them to communicate information and respond orally to a variety of texts, such as conversations, interviews, documentaries, articles, poems, short stories, and novels. Reading and literature include articles, poems, mythology, short stories, and novels. Students are engaged in written activities through which they present information, write letters, and express their feelings about different events and situations. The course also explores other forms of viewing and representing.

Français-immersion 11

(academic, 1 credit)

Course Code: 007107

In the grade 11 French immersion course, students continue to listen and respond to a variety of texts and to communicate orally information on various topics. Students are involved in such activities as improvisation and drama. Reading and literature include articles, biographies, poems, mythology, short stories, and novels. Writing activities include letters, tales, short stories, reports, and research papers. The course also explores other forms of viewing and representing.

Français-immersion 12**(academic, 1 credit)**

Course Code: 007108

In grade 12, students continue to develop their listening and oral skills in French while engaged in a wide range of activities. Reading and literature include many forms and genres, including articles, position papers, poetry, legends, short stories, novels and drama. Students write informative reports, research papers, and briefs. The course also explores other forms of viewing and representing.

Teaching Guides

Français de base à l'élémentaire, 4^e à la 6^e année
(1998)

Français de base au secondaire 1^{er} cycle, 7^e à la 9^e année (1999)

Français de base au secondaire 2^e cycle, 10^e, 11^e, 12^e année (1999)

Programme d'études de français immersion - maternelle à la 3^e année (No 166, version provisoire 1998)

Programme d'études de français immersion - 3^e à la 6^e année (No 167, version provisoire 1998)

Apprentissage et enseignement en immersion tardive (No 154, document provisoire, 1996)

Programme d'études du cours de français, immersion tardive - 7^e, 8^e et 9^e années
(No 155, document provisoire, 1996)

Programme d'études du cours de français en immersion au deuxième cycle du secondaire
(document provisoire, 1999)

GAELIC LANGUAGE

Elementary (Grades 3-6)

The aim in teaching Gaelic at the elementary level is to encourage interest in and arouse curiosity about the Gaelic heritage. Initially, students are taught common conversational phrases so they may experience a sense of satisfaction and achievement. The use of songs, games, and stories is very helpful at this stage. The songs and stories should be drawn from local tradition, if possible. This allows the students to receive approval in their own environment.

Students should have the opportunity to become familiar with historical events of particular significance to Canadians with a Scottish background. The lives of famous Canadians who share this common bond should be studied.

Daily periods of instruction in a second language are more effective than longer, more infrequent periods. It would be advantageous to have a particular classroom assigned to the teacher of Gaelic. The teacher may then create a better learning environment where language, social studies, and cultural projects can be integrated as part of the Gaelic program.

With an early introduction to the aural/oral skills and an interest in the cultural background of the Scottish tradition, the students should find the motivation needed to maintain their interest. The level or levels at which Gaelic is to be included is a matter for local decision, with advice from staff of English Program Services, if desired.

Junior High (Grades 7-9)

Junior high continues to develop students' aural/oral skills in Gaelic and to provide the opportunity to deepen the students' understanding of Scottish culture. At this level, students are also introduced to the skills of reading and writing in Gaelic. A minimum of 25 percent of class time should be provided for this in the early stages. This focus should permit the students to profit from their previously acquired skills, both for their further development and as a base for reading and writing. It is, however, important that speaking and aural comprehension not be

neglected. At the end of this stage, the student should be able to use a four-skill approach to prepare simple compositions for both oral and written presentations.

Senior High (Grades 10-12)

NOTE: A new curriculum for the senior high Gaelic program is being developed.

Gaelic 10 (academic, 1 credit)

Course Code: 007014

Senior high students who have not had previous instruction in Gaelic at the elementary and junior high school levels should follow the program at an accelerated pace. For other students, the reading and writing skills should further support the already acquired aural/oral skills.

Gaelic 11 (academic, 1 credit)

Course Code: 007015

By this stage, students should have acquired a reasonable degree of fluency in the oral use of the language. They should be allowed ample opportunity to continue to strengthen this skill. A study of grammatical structure is joined to the practical use of the four skills to enable students to begin to understand basic relationships in language usage.

Gaelic 12 (academic, 1 credit)

Course Code: 007016

The four-skill approach with cultural elements continues to serve as a base for this level. Further studies in the structure of the language and readings at an appropriate level, selected by the teacher, will be part of this program.

Teaching Guide

Gaelic 10 (Pilot Draft, 2000)



HEALTH EDUCATION

The purpose of health education in schools is to foster the growth of knowledge, attitudes, skills, and lifelong behaviours that will enable students to assume responsibility for healthy living and personal well-being.

Implementation of Foundation for Active, Healthy Living: Physical and Health Education Curriculum began in 1998–99.

This foundation document provides a framework on which educators and others in the learning community can base decisions concerning learning experiences, instructional techniques, and assessment strategies, using curriculum outcomes as the reference point. This framework provides a coherent, integrated view of learning and teaching physical and health education that reflects current research, theories, and classroom practice.

Elementary (Primary–Grade 6)

NOTE: A consultation draft of the new curriculum will be sent to schools in the spring of 2000.

The elementary school health program promotes active and healthy living as a way of life not only within a classroom but also throughout the entire school and community. The new curriculum for elementary school health promotion has two broad strands: *Understanding Myself and Others* and *Taking Care of Myself and Others*. Appropriate learning experiences will enable students to

- ▶ develop an understanding of how one can assume responsibility for personal health and safety (e.g., physical activity, rest, nutrition, disease, safety, drugs, and medicine)
- ▶ develop a healthy awareness and appreciation of the structure and function of the human body and the changes it undergoes
- ▶ develop a healthy self-concept as well as an acceptance and appreciation of others
- ▶ develop an increasing awareness of the responsibility all community members have for a safe and healthy environment
- ▶ understand and accept personal feelings and the feelings of others

- ▶ acknowledge that decision making is a personal responsibility
- ▶ develop knowledge and skills useful in interpersonal relationships with families and friends
- ▶ understand moral values, including where they come from and how they can influence personal behaviour
- ▶ appreciate and respect the cultural values of all individuals and groups

Junior and Senior High (Grades 7–11)

To ensure continuity within programs, the junior high health program is now an integral unit of the personal development and relationships program (Unit 6—Healthy Active Living). This unit includes four components for discussion at all three grade levels:

- ▶ personal wellness
- ▶ safety and emergency procedures
- ▶ substance abuse prevention
- ▶ responsible, healthy behavior

A description of the personal development and relationships program is included under Personal Development and Career Education (See Section P).

This curriculum is under review. The pilot guide will be available in the fall of 1999.

In high school, health learning outcomes are expressed in a number of subject areas, such as Biology 11 and 12. The compulsory half-credits Career and Life Management 11 and Physically Active Lifestyles 11 include a number of health-learning outcomes. Further descriptions of the these courses are included under Personal Development and Career Education in Section P.

Teaching Guides

Elementary School Health, A Program Promoting Active and Healthy Lifestyles (No. 28, 1992)
Foundation for Active, Healthy Living: Physical and Health Education Curriculum (1997)



MATHEMATICS

Elementary (Primary–Grade 6)

The elementary mathematics program includes four strands and related general curriculum outcomes:

Number Concepts/Number and Relationship Operations

Students will

- ▶ demonstrate number sense and apply number theory concepts
- ▶ demonstrate operation sense and apply operation principles and procedures in both numeric and algebraic situations

Patterns and Relations

Students will

- ▶ explore, recognize, represent, and apply patterns and relationships, both informally and formally

Shape and Space

Students will

- ▶ demonstrate an understanding of and apply concepts and skills associated with measurement
- ▶ demonstrate spatial sense and apply geometric concepts, properties, and relationships

Data Management and Probability

Students will

- ▶ solve problems involving the collection, display, and analysis of data
- ▶ represent and solve problems involving uncertainty

These strands should be interrelated and explored in a spiral manner that is introduced early and periodically reviewed and extended, to provide many varied opportunities for children to make connections; to discover the order, pattern, and relations that are the basis of mathematics; and to acquire the necessary mathematical understandings. Learners need to recognize relationships among various mathematics strands and topics and to link concepts and procedures.

The outcomes articulated for the content strands are based on the unifying ideas—communication, problem solving, reasoning, and connections.

Language and Communication play key roles in helping learners develop mathematical understandings. The program, therefore, must include many opportunities for students to question, reflect, discuss, and write and to use physical materials, pictures, and diagrams to illustrate and to communicate mathematical ideas.

Problem solving is the basis for the entire mathematics program and should provide the context for developing and applying mathematical concepts and skills. Students should have many problem-solving experiences that arise from school and other everyday contexts. The program should emphasize developing and applying strategies for solving a wide variety of problems.

Reasoning. The elementary mathematics program emphasizes reasoning at all levels. Students need many opportunities to use models, known facts, properties, patterns, and relationships to explain their thinking.

Connections. Natural connections among mathematical concepts and representations, as well as the connections that exist across curricula and in the everyday world of children, need to be emphasized in the elementary mathematics program.

Learners in early elementary school need ample opportunity to develop their abilities to compare, classify, and sort before working with the concept of numbers. These preliminary abilities and concepts are essential to the future mathematics development of learners.

The elementary mathematics program emphasizes working with fractions and decimals. All children need to acquire an efficient method for applying each of the four operations with whole numbers and with decimals. These methods are to be well-grounded in experiences with concrete materials, using real objects first and then structural materials, such as unifix cubes or base ten blocks. Children should apply these operations to many everyday situations. Students need to be

able to use a variety of mental computation and estimation strategies. They also need to learn to use calculators in appropriate computational situations.

The mathematics learning outcomes for each key stage (grades 3 and 6) are presented in *Foundation for Atlantic Canada Mathematics* (1996). For a detailed description of concepts, skills, and procedures, see the *Atlantic Canada Mathematics Curriculum Grades Primary-3* (1998) and the draft *Atlantic Canada Mathematics Curriculum Grades 4-6* (1996).

At all levels, a variety of teaching methods and contexts should be used, including

- ▶ extensive experience with concrete materials whenever a new concept is introduced
- ▶ opportunities for students to proceed at their own rate through the stages of
 - ▶ exploring and experimenting with material
 - ▶ forming and testing hypotheses about relationships
 - ▶ communicating findings, first by word of mouth or by diagram, then through writing or symbols
 - ▶ practising to establish a concept once it has been understood, usually following, rather than preceding discovery

The student's attitude towards learning is of prime importance in helping the student succeed. The seeds of a positive attitude to mathematics are sown in relevant activities, discussions, and applications to new situations.

Junior High (Grades 7-9)

To meet the varying needs and abilities of pupils in the junior high school, the mathematical experiences available should be large in scope and varied in purpose. They should evolve from the students' earlier learning experiences; hence, those planning the program must have a clear understanding of the current developments in the elementary school mathematics program. To maintain student interest and responsibility in the learning situation, teachers should broaden their classroom techniques to include such methods as small group investigations, mathematics

laboratory experiences, games and puzzles, visual aids, concrete models, applications to the environment, problems related to real situations, projects, and individualization of some aspects of the program.

In planning classroom activities, teachers should be aware of the spiral nature of the mathematics curriculum in which ideas are introduced early and extended by periodically returning to consider them in greater depth.

The junior high mathematics program should emphasize

- ▶ developing and understanding concepts by having students interplay between the five representations: concrete, pictorial, verbal, symbolic, and contextual
- ▶ solving problems to investigate and understand mathematical content
- ▶ developing and using problem-solving strategies
- ▶ using mental math and estimation strategies on a daily basis
- ▶ applying mathematics in real-world situations
- ▶ modelling situations using oral, written, concrete, pictorial, graphical, and algebraic methods
- ▶ discussing mathematical ideas and making conjectures and convincing arguments
- ▶ understanding and applying reasoning processes with special attention to spatial reasoning and reasoning with proportions and graphs
- ▶ using technology appropriately to develop concepts as an aid in problem solving and for some computations

Grade 7

In a context of interesting problems that are meaningful to students, teachers and students in grade 7

- ▶ review and extend the use of operations and properties with whole numbers and decimals
- ▶ use mental math strategies to develop mastery of calculation skills, which will then lead to estimating answers using appropriate estimation strategies

- ▶ compare and order fractions, describing mixed numbers and improper fractions concretely, pictorially, and symbolically
- ▶ work with integers to develop understanding of the four operations concretely and pictorially and to develop competency with symbols
- ▶ work with factors, prime and composite numbers, least common multiple, and greatest common factor
- ▶ solve problems involving real situations and informal graph theory
- ▶ examine estimation, metric measurement applications, ratio, percent, consumer problems, statistics, data analysis, and probability
- ▶ develop algebraic thinking, including the understanding of variable, expression, and equation
- ▶ represent situations and number patterns with tables, graphs, verbal rules, and equations and explore their interrelationships
- ▶ solve one- and two-step equations
- ▶ justify combinations of triangle classifications
- ▶ determine and use relationships between angle measures and side lengths in triangles
- ▶ apply angle pair relationships pertaining to parallel lines and triangles
- ▶ explain using a model why the angles in a triangle must sum to 180°
- ▶ sketch and build 3-D objects
- ▶ draw, describe, and apply the three transformations and identify and use the properties
- ▶ examine geometric constructions using a variety of methods
- ▶ create and describe designs using transformations
- ▶ identify, use, and convert among the SI units to measure, estimate, and solve problems that relate to length, area, volume, mass, and capacity
- ▶ apply concepts and skills related to time
- ▶ develop and use rate as a tool to solve indirect measurement problems
- ▶ apply relationships among diameter, radii, and circumference of circles
- ▶ read and interpret tables, charts, maps, and graphs including histograms
- ▶ conduct survey projects using appropriate data collection methods

- ▶ apply probability concepts
- ▶ identify all possible outcomes of two independent events using tree diagrams and area models
- ▶ apply strategies for problem solving

Grade 8

Grade 8 continues to develop skills and concepts begun in grade 7 and introduces new ones. Together, the teacher and student

- ▶ solve problems using whole numbers, integers, and decimals
- ▶ develop operations with common fractions concretely and pictorially, bringing to symbolic competence with emphasis on applications, problem solving, mental math, and estimation
- ▶ continue to develop algebraic concepts and processes to enhance the understanding of variable, expression, and equation
- ▶ represent situations and number patterns with tables, graphs, verbal rules, and equations and explore their interrelationships
- ▶ link visual characteristics of slope with its numerical value
- ▶ solve problems by finding the intersection of two graphs
- ▶ use square roots, exponents, and scientific notation
- ▶ use ratio, proportion, percent, scale drawing
- ▶ apply metric measurement, including perimeter, area, volume, estimating, rounding, and precise measurement
- ▶ estimate the area of circles
- ▶ develop and use the formula for area of circles
- ▶ describe relationships between areas and perimeter of quadrilaterals, and the area and circumference of circles
- ▶ calculate area of composite figures
- ▶ estimate and calculate the volume and reinforce areas of right prisms and cylinders and of composite 3-D figures
- ▶ examine and apply Pythagorean relationships
- ▶ examine and draw 3-D objects
- ▶ apply transformations to 3-D objects
- ▶ analyse regular polygons and their properties
- ▶ represent, analyse, describe, and apply dilations
- ▶ explore randomness and the variability of repeated samples

- ▶ construct and interpret circle graphs and box plots
- ▶ determine and apply line of best fit
- ▶ conduct experiments to find probabilities of single and complementary events
- ▶ determine theoretical probabilities of single events and complementary events
- ▶ continue developing and using problem-solving strategies

Grade 9

The grade 9 course reviews, extends, or introduces concepts involving

- ▶ integers, rational and irrational numbers, exponents, decimal approximations of square roots, and applications including Pythagorean Theorem
- ▶ explain and apply exponent laws for integral exponents
- ▶ model, solve, and pose problems involving scientific notation
- ▶ represent problems using matrices and operate on matrices (+, -, scaling, multiplication)
- ▶ apply SI measurement, including perimeter, area, volume and surface area, precision, and estimation
- ▶ examine relations, solving linear equations and inequalities, graphing linear and non-linear relations, evaluating expressions, adding and subtracting polynomials, multiplying and dividing by monomials, calculating the product of two binomials, factoring
- ▶ demonstrate that communicative, associative, distributive, identity, and inverse properties apply to operation on algebraic expressions
- ▶ determine the equation of a line by obtaining the slope and y-intercept from a graph
- ▶ ratio, proportion, percent, rate, and applications
- ▶ relate the volume of pyramids and cones to the volume of prisms and cylinders of equal bases and heights
- ▶ develop and apply ratios within similar triangles
- ▶ investigate and determine the conditions sufficient to produce a unique triangle
- ▶ identify, apply, and justify minimum conditions for congruent triangles

- ▶ relate congruence to similarity and apply properties of similar triangles
- ▶ analyse and describe transformations and their combinations using mapping notations and apply mapping notations
- ▶ investigate, determine, and apply the effect of transformations on congruence, similarity, and orientation
- ▶ determine strengths of relationships in scatter plots
- ▶ construct a line of best fit and find its equation using slope and y-intercept
- ▶ construct a curve of best fit
- ▶ display data in the most appropriate way and defend method chosen
- ▶ understand the role of data management in society
- ▶ make predictions and conduct experiments and simulations to determine probabilities involving dependent and independent events
- ▶ determine theoretical probabilities of compound events
- ▶ devise and apply strategies for problem solving

Senior High (Grades 10–12)

In planning their classroom activities, teachers should introduce ideas early and extend students' learning through periodic reviews that consider them in greater depth.

The senior high mathematics curriculum should

- ▶ refine and extend methods of mathematical problem solving
- ▶ include problem-solving approaches to investigate and understand mathematical content
- ▶ develop concepts through the interplay among the five representations: concrete, pictorial, verbal, symbolic, and contextual
- ▶ use mental math and estimation strategies on a daily basis
- ▶ apply the process of mathematical modelling to real-world situations
- ▶ continue to develop language and symbolism to communicate mathematical ideas
- ▶ include numerous and varied experiences that reinforce and extend logical reasoning
- ▶ test conjectures and express generalizations discovered through investigations

- ▶ investigate the connections and interplay among various mathematical topics and their applications

Teachers should use appropriate technology as a tool in computation and a means of developing concepts or enhancing the teaching process.

Two new mathematics courses will be implemented in September 1999 at the grade 10 level: Mathematics Foundations 10, a graduation credit, and Mathematics 10, an academic credit.

Most of the specific curriculum outcomes designated for Mathematics Foundations 10 are the same as those designated for Mathematics 10. The significance difference between the two courses lies in the levels of performance expected in regard to some outcomes.

The Mathematics foundations courses are characterized by a greater focus on concrete activities, models, and applications with less emphasis given to formalism, symbolism, computational or symbolic-manipulating ability facility, and mathematical structure. The academic level courses involve greater attention to abstraction and more sophisticated generalizations, while the foundations courses would see less time spent on complex exercises and connections with advanced mathematical ideas.

Typically, students who should enroll in the foundations courses will have experienced considerable difficulty in mathematics throughout their schooling and may lack confidence in their ability to learn. In addition, their literacy skills may not be on par with students of the same age. They may need more time on (more "passes" at) new concepts and may need connections presented in more explicit ways. They often exhibit lower self-esteem (math-wise) and require an instructional mode which is willing to accommodate time given to missing prerequisite skills/knowledge. These students need equal (or perhaps greater) access to technology. It is anticipated that approximately 30% of grade 10 students will enrol in Mathematics Foundations 10 to meet their learning needs.

Mathematics Foundations 10

(graduation, 1 credit)

Course Code: 008009

Students in Mathematics Foundations 10 will explore the following subject areas:

Data Management

- ▶ designing and conducting experiments
- ▶ interpreting displays of data
- ▶ studying distributions
- ▶ examining scatter plots and trends

Networks and Matrices

- ▶ translating between networks and matrices
- ▶ understanding multiplication of matrices and powers of matrices

Patterns and Equations

- ▶ representing patterns
- ▶ developing equations from patterns
- ▶ solving linear and quadratic equations
- ▶ manipulating polynomials

Modelling and Functions

- ▶ interpreting and constructing graphs
- ▶ exploring functions
- ▶ modelling—linear and non-linear regression

Trigonometry

- ▶ solving problems in similarity and right triangles, vectors, and bearings
- ▶ understanding the Pythagorean Theorem and testing its proofs
- ▶ applying right triangle trigonometry

Geometry of Packaging

- ▶ developing and applying perimeter, area, surface area, and volume
- ▶ discovering relationships between fixed perimeters and area and between fixed volumes and surface areas
- ▶ applying inductive reasoning

Mathematics 10 (academic, 1 credit)

Course Code: 008008

Recommended Prerequisite: Grade 9 Mathematics

Students in Mathematics 10 will explore the following subject areas:

Data Management

- ▶ designing and conducting experiments
- ▶ interpreting displays of data
- ▶ studying distributions, normal curve, and standard deviation
- ▶ examining scatter plots and trends

Networks and Matrices

- ▶ translating between networks and matrices
- ▶ understanding multiplication of matrices and powers of matrices

Patterns and Equations

- ▶ representing patterns
- ▶ developing equations from patterns
- ▶ solving equations—linear, quadratic, exponential, simple radical and absolute value
- ▶ manipulating polynomials

Modelling and Functions

- ▶ interpreting and constructing graphs
- ▶ developing functions and function notation
- ▶ understanding transformations of the quadratic and absolute value functions
- ▶ modelling—linear and non-linear regression

Trigonometry

- ▶ solving problems in similarity and right triangles, vectors, and bearings
- ▶ understanding the Pythagorean Theorem and testing its proofs
- ▶ applying right triangle trigonometry

Geometry of Packaging

- ▶ developing and applying perimeter, area, surface area, and volume
- ▶ discovering relationships between fixed perimeters and area and between fixed volumes and surface areas
- ▶ applying inductive reasoning and developing arguments

Linear Programming

- ▶ interpreting and writing constraints
- ▶ representing constraints algebraically as inequalities and with graphs
- ▶ solving systems of equations
- ▶ solving linear programming problems using graphs

Mathematics Foundations 11*(graduation, 1 credit)*

Course Code: 008011

Recommended Prerequisite: Mathematics Foundations 10 or Mathematics 10

NOTE: Piloting will begin in September 1999 of a new curriculum developed collaboratively by the Atlantic provinces. Implementation is expected to begin in September 2000.

This mathematics course reviews, extends, and introduces concepts involving

- ▶ statistics, including reading and interpreting tables, charts, maps, and graphs, using the line of best fit in data analysis, using probability for prediction and simulations, and understanding abuses of statistics
- ▶ consumer mathematics: personal financing and major purchases
- ▶ dilations as a vector stretch leading to similar triangles and ratio and proportion
- ▶ matrices to display and interpret data, operation on matrices, and applications to networking, coding, and decoding
- ▶ formulas for solving linear equations and inequations
- ▶ direct and inverse variation
- ▶ linear measurement, area, volume, mass, and surface area
- ▶ right triangle trigonometry and applications, co-ordinate graphing of relations, solution of simultaneous equations and inequations, applications, algebra (products and factors), and quadratics.

Mathematics 11 (academic, 1 credit)

Course Code: 008067

*Recommended Prerequisite: a mathematics course at the grade 10 graduation or academic level***NOTE:** Piloting will begin in September 1999 of a new curriculum developed collaboratively by the Atlantic provinces. Implementation is expected to begin in September 2000.

This mathematics course reviews, extends, or introduces concepts involving

- ▶ problem-solving skills and strategies
- ▶ polynomials, radicals, and real numbers
- ▶ linear equations, systems of linear equations and applications, inequations and systems of inequations, and linear programming
- ▶ ratio, proportion, and variation, including direct, inverse, and joint
- ▶ quadratic equations and applications
- ▶ analytic geometry, including properties of figures, circles, and parabolas
- ▶ statistics, including using data for decision making, testing hypotheses through experiments and simulations, and probability and expectation
- ▶ right and acute angle trigonometry, laws of sines and cosines and applications, and graphs of sine and cosine
- ▶ three-dimensional geometry
- ▶ mathematics for daily use, including banking and income tax
- ▶ matrices, operations, and applications, including inventory and production costs and transformations related to matrices

Pre-calculus Mathematics 11*(academic, 1 credit)*

Course Code: 008010

*Recommended Prerequisite: Mathematics 10***NOTE:** Piloting will begin in September 1999 of a new curriculum developed collaboratively by the Atlantic provinces. Implementation is expected to begin in September 2000.**NOTE:** This course is intended for students who are expecting to study calculus at the post-secondary level.

Emphasis in this advanced mathematics course is on proof, derivation, and problem solving. Many opportunities are provided to use algebraic manipulation in applied situations.

In this course, students examine

- ▶ functions (constant, linear, quadratic, exponential, logarithmic, and trigonometric in addition to graphing for each)
- ▶ translations, reflections, and stretches and their effects on equations and graph; inverse function; evaluations for various substitutions; zero(s) and assigned $f(x)$ values; inequations; applications; and calculator use
- ▶ periodic real-world phenomena using sine and cosine functions
- ▶ connections between trigonometric and circular functions
- ▶ law of sines and cosines, identities, and trigonometric equations
- ▶ matrices and operations, relations of matrices, and transformations
- ▶ matrices and linear systems
- ▶ dilatations: proofs, similar triangles, and the basic proportionality theorem
- ▶ probability, permutations, combinations, and the binomial theorem
- ▶ circles and ellipses: transformations, intersections, angles in circles, and lines and segments relative to circles

Mathematics Foundations 12*(graduation, 1 credit)*

Course Code: 008013

*Recommended Prerequisite: Mathematics at the grade 11 level***NOTE:** Piloting will begin in 2000 of a new curriculum developed collaboratively by the Atlantic provinces. Implementation is expected to begin in September 2001.

In this foundations course, students examine

- ▶ statistics, to investigate confidence intervals through 90% box plots and applications of standard deviation and normal distribution; 95% confidence intervals (formula approach); and probability
- ▶ consumer- and career-applied mathematics that may include income tax, financial management, and investments (stocks, bonds, and annuities)
- ▶ systems of equations and inequations, and linear programming
- ▶ trigonometry applied in three-dimensions, in triangles using law of sines and cosines, and in calculating area of triangles
- ▶ vectors in problems of levers, pulleys, and wind forces
- ▶ matrices in business applications
- ▶ properties of circles and proofs
- ▶ number patterns and arithmetic, and geometric sequences and series.

Mathematics 12 (academic, 1 credit)

Course Code: 008073

Recommended Prerequisite: Mathematics at the grade 11 level

NOTE: Piloting will begin in 2000 of a new curriculum developed collaboratively by the Atlantic provinces. Implementation is expected to begin in September 2001.

This mathematics course reviews, extends, or introduces concepts involving

- ▶ problem-solving skills and strategies
- ▶ statistics and probability, including experimental and theoretical probability, testing of hypotheses through experiments and simulations, expectation, and chi-square relations and functions
- ▶ quadratic and linear functions, including transformations and their effects on graphs and equations
- ▶ operations with polynomials, equations involving rational expressions, applications related to maximum and minimum problems, quadratic regions, linear and quadratic systems

- ▶ exponential functions, graphs, and applications
- ▶ logarithmic functions, graphs, and applications
- ▶ analytic geometry, including intersections of circles, lines and quadratics, extension to co-ordinates in 3-space, distance and equations and planes in 3-space
- ▶ trigonometry in problems involving triangles
- ▶ the connection between trigonometry and circular functions as a means of understanding real-world phenomena
- ▶ matrices, including row operations and the use of the augmented matrix in solving systems of linear equations, applications
- ▶ sequence and series, including applications to compound interest, annuities, and mortgages
- ▶ introduction to limits of using calculators and/or computers

Pre-calculus Mathematics 12

(academic, 1 credit)

Course Code: 008012

Recommended Prerequisite: Mathematics 11 or Pre-calculus Mathematics 11

NOTE: Piloting will begin in 2000 of a new curriculum developed collaboratively by the Atlantic provinces. Implementation is expected to begin in September 2001.

NOTE: This course is intended for students who are expecting to study calculus at the post-secondary level.

Emphasis in this advanced mathematics course is on proof, derivation, and problem solving. Many opportunities are provided to use algebraic manipulation in applied situations.

The Pre-calculus Mathematics 12 course reviews, extends, or introduces concepts involving

- ▶ constant, linear, and quadratic functions, polynomial functions, the theory of equations, factor theorem, and rational root theorem
- ▶ rational functions, curve sketching, and operations with rational expressions
- ▶ algebraic functions, and logarithmic functions extended to include e^x and $\ln x$

- conic sections (parabolas, circles, ellipses, and hyperbolas)
- transformations, cylinders, cones, and spheres
- trigonometric functions and graphs
- compound, double, and half-angle identities
- equations
- vectors on the plane and in 3-D
- complex numbers, De Moivre's Theorem, polar co-ordinates
- sequences and series and applications
- introductory calculus, including limits, tangents, slopes of curves, velocity and acceleration, differentiation of simple functions, and anti-differentiation of simple functions.

Advanced Mathematics 12

(advanced, 1 credit)

Course Code: 008015

Recommended Prerequisite: Advanced Mathematics 11 or Mathematics 11

NOTE: Piloting will begin in 2001 of a new curriculum developed collaboratively by the Atlantic provinces. This curriculum will be a fourth course available to students who wish to continue their study of mathematics and science in post-secondary institutions. Implementation is expected to begin in February 2002.

The prerequisite for this fourth course will include the successful completion of both grade 11 and 12 mathematics.

For the time being, Advanced Mathematics 12 is a new name for the old Mathematics 541 course. This course is for students with special aptitude, interest, and/or ability in mathematics. The topics include an in-depth study of pre-calculus mathematics and some introductory calculus.

Teaching Guides and Outlines

Foundation for Atlantic Canada Mathematics
(1996)

Atlantic Canada Mathematics Curriculum Grades Primary-3 (1998)

Atlantic Canada Mathematics Curriculum Grades 4-6 (1996) (Draft)

Atlantic Canada Mathematics Curriculum Grade Seven (1999)

Atlantic Canada Mathematics Curriculum Grade Eight (1999)

Atlantic Canada Mathematics Curriculum Grade Nine (Implementation Draft, 1999)

Mathematics Nine and Ten (No. 81, 1983)

Atlantic Canada Mathematics 10 (Implementation Draft, 1999)

Atlantic Canada Mathematics Foundations 10 (Implementation Draft, 1999)

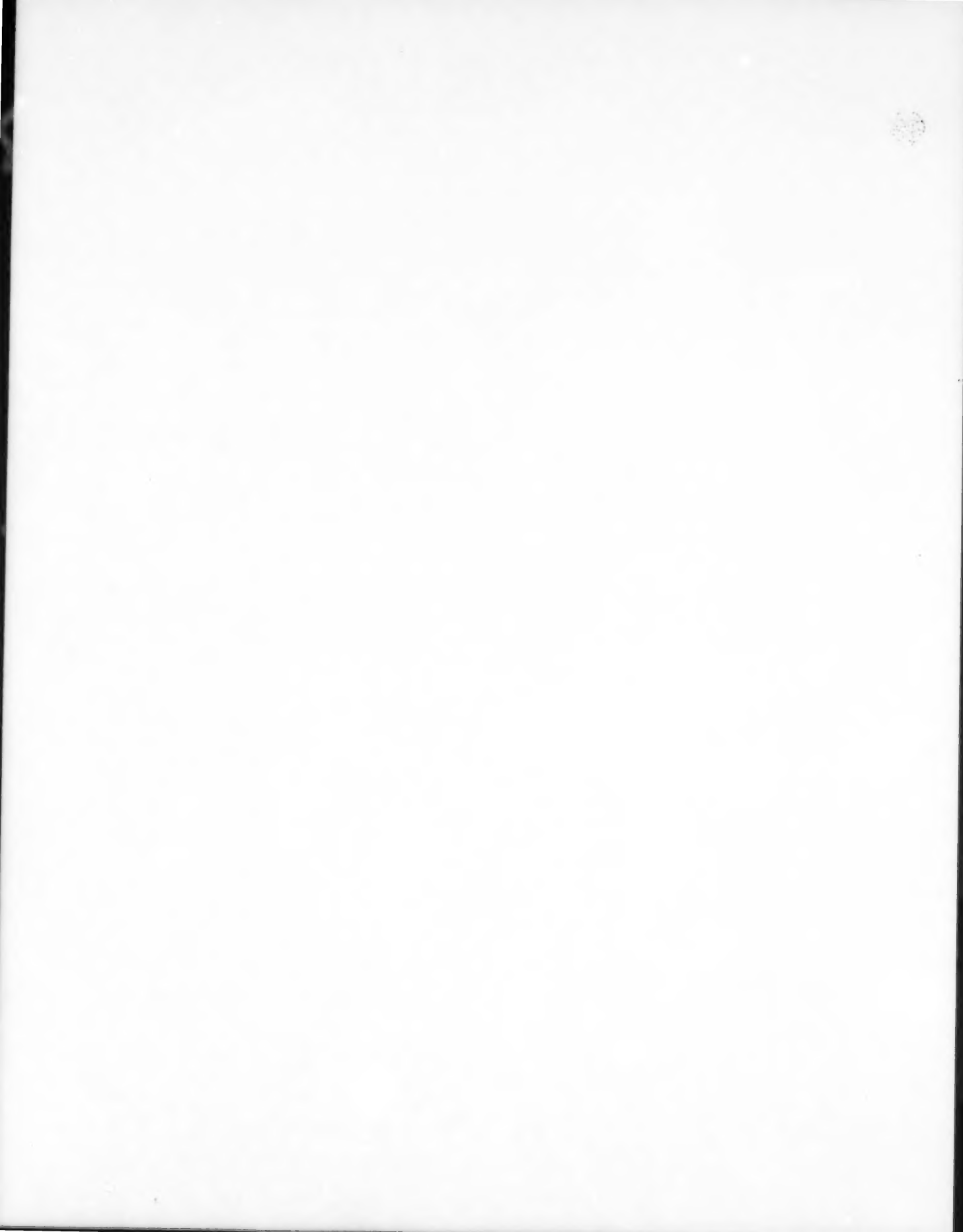
Atlantic Canada Mathematics 11 (available September 2000)

Atlantic Canada Mathematics 12 (available February 2001)

Atlantic Canada Pre-calculus 12 (available September 2001)

Interim Guidelines for Mathematics 200 Programs (1990-91)

Outlines for MAT 431, MAT 432, MAT 441, MAT 442



Mi'KMAQ LANGUAGE

Junior High (Grades 7-9)

Language reflects culture and defines a people. The Mi'kmaq language program provides for students with a curriculum that promotes the development of communication skills in Mi'kmaq language. The communicative approach, together with resource-based learning, ensures holistic learning of the Mi'kmaq language.

Students who study the Mi'kmaq language, including non-Mi'kmaq students and students from other linguistic groups, develop an understanding and appreciation of Mi'kmaq culture and also attain a level of linguistic competence. Learning the Mi'kmaq language gives students the opportunity to engage in the preservation of this language.

The grade 7 Mi'kmaq language curriculum for non-Mi'kmaq speakers is under development and will be piloted in 1999-2000.

OTHER LANGUAGES

German

Senior High (Grades 10-12)

The German program offered to senior high school students is designed to lead to proficiency in the language processes of listening, speaking, reading, and writing. It also offers students the opportunity to learn the fundamentals of German grammar and to acquire some familiarity with German literature and other cultural and historical achievements. A German video series may be used to enhance the cultural and linguistic content of the program. German films, music videos, and songs also contribute to the learning of authentic material. Because of the age, interests, and academic background of the students who select German as a course option, the program usually progresses at a fairly rapid pace. This allows teachers to offer core program materials during the first two years, followed by a selection of paperbacks on literary and cultural topics during the final year.

German 10 (academic, 1 credit)

Course Code: 007017

German 10 offers basic vocabulary and structures with some expansion to permit more interesting content. Core materials are presented in simple dialogues that gradually familiarize students with more complex material. Reading and writing are also introduced at this level.

The direct method is used from the beginning to present vocabulary and sentence structure in familiar situations. Program materials provide a range of high frequency vocabulary and expressions in the context of dialogues. After students have practised these, they make observations about structures they have used. Students are encouraged to learn how the elements of the language relate to each other. Videos, games, and role playing contribute to the overall enjoyment of learning a foreign language.

German 11 (academic, 1 credit)

Course Code: 007018

While the student continues to develop basic skills in this German course through the appropriate use of program materials, he/she is now encouraged to practise analysing grammatical structure. The reading program, which encourages approximation, fosters good reading habits by helping students grasp meaning from phrases and sentences rather than individual words. The use of the language is always stressed over the ability to quote rules or to translate. Both accuracy and fluency are encouraged in the oral use of the language, with the emphasis being on accuracy in these early stages.

German 12 (academic, 1 credit)

Course Code: 007019

In this German course, core program materials continue to be available to assist in developing the four language processes; however, much of the students' development at this stage focusses on language use. A selection of printed materials designed to stimulate conversation and writing is made available to students. The teacher's judicious use of such materials plus well-chosen projects can result in stimulating learning experiences. While students continue to analyse grammatical structure and to read, write, and speak German, they should now be able to use their skills both for pleasure and information. This level is designed to prepare students for university entrance programs and provide a satisfying experience in language learning.

Latin

Grades 9-12

Latin is offered to students in grades 9 to 12. The program is designed to help students learn to read Latin. At first, the emphasis is placed on becoming familiar with the language. Later, the course focusses on Roman literature and culture. The study of grammatical structure aims to increase the students' ability to read at a more advanced level. As they become capable of understanding reading selections, they also learn to translate Latin passages into good idiomatic

English. Throughout the program, both oral reading of Latin and oral translation of English into Latin is encouraged. As the students progress, they need less stress on grammatical construction and more on reading so that, as their proficiency develops, they may have the opportunity to read Latin authors.

Grade 9

Introductory Latin stresses the acquisition of vocabulary. The pronunciation of new words and phrases and their comprehension help students to enjoy the study of Latin. With respect to verbs, the first to the fourth conjugations are introduced in the present and imperfect indicative active tenses as well as in the imperative active. The agreement of adjectives in the first and second declensions is examined. Nouns of the first, second, and third declensions are studied in the six cases. If time permits, it may be possible to introduce the study of third declension neuter nouns.

Latin 10 (academic, 1 credit)

Course Code: 007021

Latin 10 is a continuation of the grade 9 Latin course. Students continue their study of vocabulary and grammatical constructions while practising reading both for free comprehension and for more accurate translation. At this level, the passive voice is introduced. Students should progress to a study of the present, imperfect, and future indicative passive tenses in fourth conjugation verbs.

Latin 11 (academic, 1 credit)

Course Code: 007022

As the student's vocabulary and knowledge of grammar increases, he/she is able to read with greater ease. Accordingly, extra reading material for both comprehension and translation is made available for use in Latin 11. Testing probably occurs at less frequent intervals and is more comprehensive. Students should be able to progress to the study of deponent and semi-deponent verbs.

Latin 12 (academic, 1 credit)

Course Code: 007023

Latin 12 places less emphasis on grammar and proportionately more on reading. Students should have occasion to participate in projects involving research on topics already discussed in their reading program. Students should also now become more skilled in sight reading and translation. Regular review of materials learned earlier will be very important. Students must have a good understanding of the ablative absolute and indirect statement constructions because of their extensive use in the grade 12 work. Subjunctive mood is also introduced and studied extensively. Progress tests in each unit of work can do much to assist in determining the pace of the program and the areas that need greater attention or emphasis.

Spanish

Senior High (Grades 10-12)

The Spanish program offered at the senior high school level is a three-year program. Although it deals with the fundamentals of Spanish grammar and syntax, the main emphasis is on learning to understand and to speak Spanish. Students spend much time practising the basic patterns of Spanish speech. Students also gain some insight into the cultural achievements of Spain and Latin America: they have opportunities to listen to and sing Spanish songs, read simple Spanish stories and poems, listen to Spanish radio programs, and watch Spanish films. Students are also encouraged to correspond with penpals in Spain and/or Latin America.

Spanish 10 (academic, 1 credit)

Course Code: 007024

In Spanish 10, students learn to understand and to communicate in Spanish with a minimum of grammar. They spend much time acquiring vocabulary and practising essential language patterns.

The greatest emphasis at this level is on comprehension and pronunciation skills so students can learn to hear speech patterns and to imitate them as accurately as possible. After

correcting errors and practising pronunciation drills, students progress to the directed dialogues. These provide practice for groups of students in the most frequently used expressions of the language. Songs, classroom visits by Hispanics, slide-show presentations and computer vocabulary games help keep the program interesting and limit the emphasis on grammar.

Spanish 11 (academic, 1 credit)

Course Code: 007025

In Spanish 11, a continuation of Spanish 10, students become familiar with more complex patterns of speech and writing. More emphasis is placed on reading stories, anecdotes, newspaper articles, and magazines. Video presentations are offered when available.

The further use of basic language patterns helps students acquire the ability to manipulate structure and vocabulary. As students become familiar with the structures, they are taught to read the material and adapt it to their own situations. By the end of the year, some students should be able to participate in basic conversations with native speakers of Spanish.

Spanish 12 (academic, 1 credit)

Course Code: 007026

In Spanish 12, a continuation of Spanish 11, more challenging reading selections are introduced in this course. Audio-visual resources are used to help students become accustomed to follow-by-ear Spanish spoken at normal speed. Students also do some original composition work.

Since students should now have acquired a reasonable level of aural/oral skill as described in the two earlier levels of Spanish, more use may now be made of the written form of the language. Composition is now a frequent activity and progresses from a series of simple statements made in response to question clues to more original work. For some students, this can be quite productive; others will not be capable of performing such demanding or complex exercises. The more complex structures and vocabulary recommended in program materials for Spanish 12 will need widely varying methods of

presentation. Suggestions in the teacher's key and in the guidelines may assist the teachers in these presentations.

Teaching Guides

Español, Guidelines for the Teacher (No. 4, 1976)

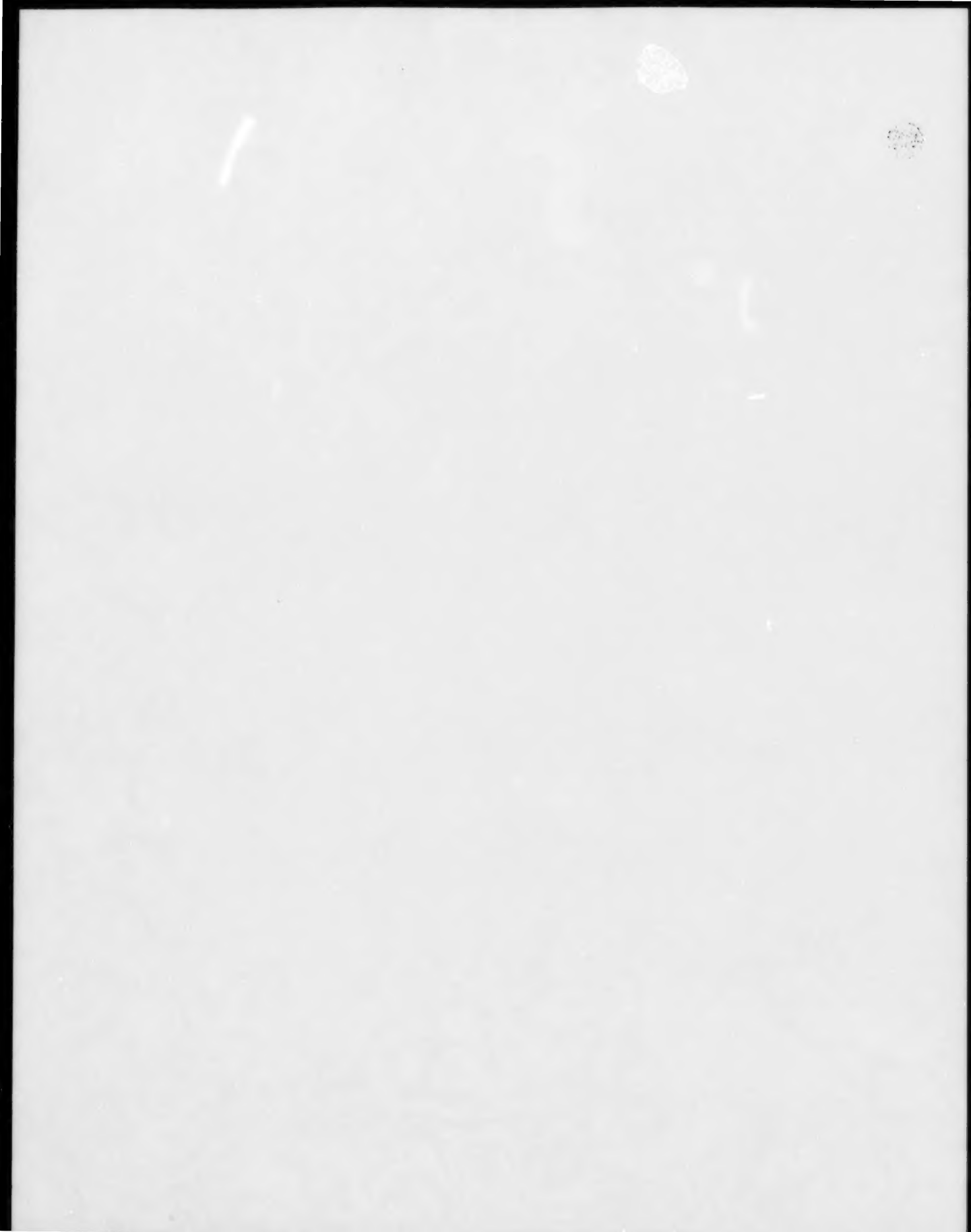
German, Grades 10-12 (No. 11, 1974)

Latin Grades 9 to 12 (No. 40, 1979)

Supplementary Document

Guidelines for the Treatment of Grammar,

Supplement to German, Grades 10-12 (No. 1, 1977)



PERSONAL DEVELOPMENT AND CAREER EDUCATION

Personal Development and Relationships (PDR)

Junior High (Grades 7-9)

NOTE: This curriculum is under review. A draft consultation guide will be available in the fall of 1999.

NOTE: Some topics appear in both the family studies and the personal development and relationships (PDR) program.

In schools where all students take family studies, topics that are common to both programs should be taught in family studies classes. In schools where not all students take family studies, the family studies and PDR teachers should collaborate so that while the integrity of both programs is maintained, duplication is avoided.

PDR is a three-year program for all junior high students.

The program offers six units sequentially at each grade level: Climate Building, Self-Awareness and Acceptance, Relationships, Human Growth and Development, Career Planning, and Healthy, Active Living. These units focus on developing personal growth in areas of understanding and acceptance of self, feelings and their management, relationships with others, human growth and development, career planning, and an active, healthy lifestyle. Throughout the program, students develop their ability to communicate and make decisions.

The Healthy, Active Living unit includes those health-related issues included in the original junior high health program.

Grade 7

In grade 7, each of the six PDR units aims to develop the student's understanding of the nature of self and its formation, the recognition of feelings and their management, the decision-making process and its application, the

development and maintenance of positive relationships, the changes occurring during puberty, the process of reproduction, sexually transmitted diseases, AIDS, career and educational exploration, disease, substance abuse prevention, environmental awareness, and safety and emergency procedures related to babysitting.

Grade 8

While expanding their understanding of the concepts offered in grade 7, students in the grade 8 PDR program learn about managing feelings, using decision-making processes, developing a positive self-concept, recognizing the role and influence of friends and peers, setting long-range goals based on an understanding of oneself and the world of work, and understanding and respecting oneself and others in relation to sexuality. Students learn about sexual attitudes, sexual expression, and the transmission, treatment, and prevention of sexually transmitted diseases, including AIDS. They learn about nutrition, substance abuse prevention, the handling of emergencies and injuries, and responsible, healthy behavior relating to consumer awareness.

Grade 9

The grade 9 PDR program emphasizes the importance of personal behavior, responsibility, the consequences of one's actions for others, and the necessity to think beyond one's self. Students focus on specific educational planning and become aware of the options and opportunities available in the workplace and in the community. They learn about concerns and decisions related to family abuse, human sexuality, teenage pregnancy, sexually transmitted diseases, AIDS, and substance abuse. They develop an increased awareness of fitness, safety and accidents, and personal health care.

Senior High (Grades 10-12)

Life/Work Transitions 10

(open, 1 credit or ½ credit)

Course Code: 149057 (10)

149055 (10A)

149056 (10B)

Life/Work Transitions 10 will help students to understand the relationship between their high school studies and a range of post-secondary destinations. The course focusses on examining career options, making choices, exploring the workplace, and developing employability skills. Learning modules for this course include the following: Fundamentals of Life/Work; Planning for a Changing World; Workplace Readiness; A Life/Work Simulation; Employability Portfolio; and Independent or Group Project.

Career and Life Management 11

(open, ½ credit)

Course Code: 149020

Career and Life Management 11 is a compulsory half-credit course. It is intended to help prepare maturing high school students for their future in a rapidly changing society. The course is developed around three units of study: Self-Management, Financial Management, and Career Awareness. The course is being revised one unit at a time. The revised Career Awareness unit will be sent to schools in the fall of 1999.

The course focusses on growth in students' self-knowledge and understanding; strategies for improving students' personal well-being; the development, maintenance, and enhancement of relationships; the realities of life/work; wise management of financial resources; and development of personal action plans leading to living independently and accomplishing personal goals.

Physically Active Lifestyles 11

(open, ½ credit)

Course Code: 149021

NOTE: This curriculum is under review.

Physically Active Lifestyles 11 is a compulsory half-credit course requiring students to experience a variety of healthful, physically active activities and to have sound knowledge of the health benefits of these activities. The course has a sound theoretical base upon which the activity component is built.

Successful students are able to

- ▶ select and participate in physical activities that will increase personal levels of physical fitness
- ▶ make informed decisions about the physical benefits of various activities in high school and in adult life
- ▶ demonstrate healthy self-esteem and an understanding of the importance of personal fitness, fair play, and healthy lifestyle habits
- ▶ show awareness of the range of facilities and services available to them in their community

By the end of the course, students will have had the opportunity to develop personal responsibility for their own health and physical fitness.

Tourism 11

(academic, 1 credit or ½ credit)

Course Code: 098197 (11A)

098198 (11B)

Tourism 11 gives students an introduction to the tourism industry.

The course offers students opportunities to develop the essential knowledge and skills needed to enter the tourism industry or post-secondary tourism programs. Students develop their skills in communicating, problem solving, organizing and managing information, working with others and working independently, and using and adapting to new technology.

The course focusses on career planning and employability skills and on industry design and development (for example, develop a plan for eco-tourism in South America). Students apply and expand their learning in community or workplace settings through job shadowing, field trips, and work experience. Learning experiences have a strong applied focus with an emphasis on integrating, applying, and reinforcing learning in other courses.

In addition to the compulsory modules Fundamentals of Tourism and Career Exploration in Tourism, other modules may include Transportation, Hospitality, and Attractions; Tourism Attractions, Travel Trade, and Tourism Services; and Tourism Development and Design.

This course may be offered as a full-credit or a half-credit academic course.

Teaching Guides

Personal Development and Relationships, Grades 7, 8, 9 (No. 125, 1992)

Educational and Career Explorations, Grade 7 (No. 99, 1987)

Education and Career Explorations, Grade 8 (No. 103, 1987)

Physically Active Lifestyles (No. 144, 1996)

Career and Life Management (No. 145, 1996)

Life/Work Transitions 10 (1999)

Tourism 11 (1999)



PHYSICAL EDUCATION

The primary aim of the physical education program from primary through the senior high schools in Nova Scotia is to help students participate in and develop a physically active lifestyle that will enable them to experience a more enjoyable quality of life physically, mentally, emotionally, and socially. If students are to be involved in physical activity on a lifelong basis, they must be equipped with the skills, knowledge, and attitudes that will enable them to enjoy and benefit from these activities. For students to acquire the necessary skills, knowledge, and attitudes, teachers must establish a positive educational learning environment inside and outside the classroom, the gymnasium, and the school.

The encouragement of active, healthy living should permeate any comprehensive, well-balanced physical education program. Children need not only develop physical skills but experience a learning environment that values activity and a healthy lifestyle.

Foundation for Active, Healthy Living: Physical and Health Education Curriculum provides a framework on which educators and others in the learning community can base decisions concerning learning experiences, instructional techniques, and assessment strategies, using curriculum outcomes as the reference point. This framework provides a coherent, integrated view of learning and teaching physical and health education that reflects current research, theories, and classroom practice.

Elementary (Primary-Grade 6)

In the early grades of elementary school (primary to 3), students should be helped to develop creativity, self-expression, and communication through movement and play. Students should have opportunities to develop perceptual motor skills, the prerequisites to more complex motor coordination, through rhythmic activities and dramatic play.

The five major areas of the physical education program at this level are basic movement,

educational gymnastics, dance, skill development, and alternative environments. Personal and social development is also a major focus. All encourage the development of physical skills, creativity, self-expression, communication, rhythmic activities, and dramatic play. This program forms a part of an integrated curriculum that should involve other aspects of the elementary school program in planned activities or experiences.

The physical education program in the senior elementary grades (4-6) progresses naturally from the physical education program in the early grades to include helping students extend, refine, and apply gross and fine motor skills in the areas of active living, educational gymnastics, skill development, dance, and alternative environment activities. Play and movement experiences continue to be important as children continue to mature, and personal and social development will continue to be a focus.

Junior High (Grades 7-9)

NOTE: Implementation of the new curriculum guide for physical education, grades 7-9, will begin in September 1999.

The physical education program at the junior high level should help students understand that physical fitness and physical activity are necessary for a healthy body. Students should have opportunities to develop and maintain cardiovascular endurance, flexibility, muscular strength, and endurance.

Students should understand that they can adapt and refine their motor skills as they participate in specific physical activities. The major areas of the physical education program at this level are active living, skill application in games and activities, outdoor activities, educational gymnastics, and dance. Students should develop a positive attitude towards physical activity and enjoy participating in the instructional, intramural, and interscholastic components of physical education.

Senior High (Grades 10-12)

NOTE: New curriculum guides for physical education, grades 10-12, are in development with pilots planned for 2000-2001.

At the senior high school level, the physical education program emphasizes the need for students to change sedentary lifestyles through active living, physical fitness, lifetime recreational skills, and leadership. The program should be challenging but should also allow for personal achievement at various levels of participation. Teachers should take into account the differences, needs, and desires of students to help students acquire the self-esteem that comes with success and enjoyment.

The elective physical education program in the high school should help students understand that physical activity is necessary to maintain physiological efficiency. During their final years of public education, students should have the opportunity to evaluate their own personal fitness levels and be able to interpret any implications of the physical fitness test results. Having done this, they should be able, with the assistance of the physical education teacher, to construct and use a physical fitness program to maintain and develop desirable levels of physical fitness. They should also be able to develop fundamental skills in and knowledge of specific activities that will enable them to enjoy leisure-time pursuits outside the school.

Physical Education 10 (open, 1 credit)

Course Code: 101028

In schools that offer three sequential years of high school physical education, Physical Education 10 should consist primarily of helping students refine skills for lifelong recreational activities and of providing students with leadership opportunities.

Physical Education 11 (open, 1 credit)

Course Code: 101030

This physical education course places greater emphasis on lifetime recreation activities, with a balance between indoor and outdoor activities. Physical fitness and the development of leadership skills continue as priorities.

Physical Education 12 (open, 1 credit)

Course Code: 101032

This physical education course concentrates on fitness opportunities, outdoor pursuits, and individual and dual games. Many opportunities should be offered to learn and practise leadership skills.

Teaching Guides

Foundation for Active, Healthy Living: Physical and Health Education Curriculum (1997)

Physical Education Curriculum, Grades Primary-6 (1998)

Physical Education Curriculum, Grades 7-9 (1999)

Physical Education, Grades 7-12 (No. 90, 1985)

SCIENCE

Elementary (Primary-Grade 6)

The elementary science program is a hands-on program that encourages children to learn by manipulating materials, observing first hand, and talking and writing about what they are learning. This active, experiential approach promotes the importance of building and expanding on the natural curiosity of children and recognizes the valuable experiences that children bring to the classroom. This approach seeks to nurture in children a lifelong desire to experience, question, and investigate. It provides students with opportunities to engage in problem solving that may involve creating models, designing and building inventions, or reaching a decision that is defensible and personally acceptable.

In this program, students learn how to conduct investigations by defining problems, seeking answers, making plans, and evaluating their own and others' thinking. They develop positive attitudes to science and scientific concepts. They begin the process of becoming scientifically literate and technologically competent individuals.

By the end of grade 3, students are expected to

- ▶ observe and identify living and nonliving things in their environment
- ▶ classify on the basis of appearance (colour, size, texture, shape) and of similarities and differences (plants/animals, living/non-living, push/pull, roll/slide)
- ▶ demonstrate numeracy, including counting, comparing, estimating, ordering, and creating and using simple graphs and data tables
- ▶ measure length, volume, temperature, and time
- ▶ communicate through talk and writing and by drawing diagrams, simple charts, and graphs
- ▶ draw simple inferences from experimental work and field observations

By the end of grade 6, students are expected to

- ▶ make quantitative and qualitative observations and record them in charts and graphs or in writing

- ▶ classify collected living or preserved materials using a systemic procedure
- ▶ use numbers to measure, to compare, and to make graphs and calculations related to their experiments
- ▶ measure length, area, volume, liquid volume, time, angles, and temperature
- ▶ communicate effectively in talk and writing and by preparing diagrams, drawings, graphs, charts, and data tables
- ▶ effectively read directions for doing experiments and understand suitable resource books
- ▶ experiment by following directions
- ▶ design simple experiments so that outcomes can be predicted and verified, explain the results observed, interpret data logically, recognize and control variables, and make suggestions for further experiments

The following are the recommended topics within the elementary program.

Primary

To teach the skills of observing, classifying, measuring, and communicating, teachers should provide students with concrete experiences such as growing plants and caring for animals, taking nature walks, and engaging in discussions and activities that demonstrate such concepts as up/down, near/far, fast/slow, push/pull, roll/slide, and living/non-living.

Grades 1 and 2

- | | |
|--------|--------------------------------------|
| Unit 1 | — Using The Senses and Classifying |
| 2 | — Properties, Measurement and Change |
| 3 | — Organisms—Seeds and Plants |
| 4 | — Animals |
| 5 | — Water and Air |
| 6 | — Moving Things |

Grades 3 and 4

- | | |
|--------|--|
| Unit 1 | — Plants |
| 2 | — Identifying Substances (Mystery Powders) |
| 3 | — Measurement and Motion |
| 4 | — Rocks and Soil |
| 5 | — Living Things and Environments |
| 6 | — Heat |

- 7 — Sound
- 8 — Magnets

Grades 5 and 6

- Unit 1 — Communities of Living Things
- 2 — Life Cycles of Plants and Animals
- 3 — Chemical and Physical Change
- 4 — Electricity
- 5 — Changes in the Earth
- 6 — Weather
- 7 — Weight, Volume, Buoyancy
- 8 — Communication
- 9 — Forces and Their Effects
- 10 — The Solar System and Beyond

NOTE: The elementary science program is currently under review. Piloting will begin in 1999-2000 of a new elementary science curriculum developed collaboratively by the Atlantic provinces. The following outline, based on the *Pan-Canadian Common Framework of Science Learning Outcomes*, will be used in the curriculum:

Primary

Exploring the World with Our Senses

Grade 1

Needs and Characteristics of Living Things
Properties of Objects and Materials
Materials and Our Senses
Daily and Seasonal Changes

Grade 2

Animal Growth and Changes
Liquids and Solids
Relative Position and Motion
Air and Water in the Environment

Grade 3

Plant Growth and Changes
Materials and Structures
Invisible Forces
Exploring Soils

Grade 4

Habitats and Communities
Light
Sound
Rocks, Minerals, and Erosion

Grade 5

Meetings Basic Needs and Maintaining a Healthy Body
Properties and Changes of Materials
Forces and Simple Machines
Weather

Grade 6

Diversity of Life
Electricity
Flight
Space

Junior High (Grades 7-9)

At the junior high level, students become familiar with concepts in life, physical, earth, and space science. Students should be given opportunities to participate in science fairs. These provide public recognition of their projects and enable students to gain hands-on experience while engaging in challenging extra-curricular assignments. The junior high science program emphasizes the development of concepts, skills, and attitudes.

Grade 7

Core Topics: characteristics of living things; chemistry of solutions; force and motion; and land formation and change.

Optional Topics: energy; agriculture; heat; wise use of the forest; local option.

Grade 8

Core Topics: diversity of living things; the crust of the earth; magnetic and electrical forces; chemical changes.

Optional Topics: energy; work and energy; heat transfer; science in fishing; local option.

Grade 9

Core Topics: environmental science; chemical modelling of molecules; density and pressure; current electricity; and introduction to light or sound.

Optional Topics: energy; weather (as applications of density and pressure); ocean science; local option.

NOTE: The junior high science program is currently under review. Piloting will begin in 1999–2000 of a new curriculum developed collaboratively by the Atlantic provinces. The following outline, based on the *Pan-Canadian Common Framework of Science Learning Outcomes*, will be used in the curriculum:

Grade 7

Interactions Within Ecosystems
Mixtures and Solutions
Heat
Earth's Crust

Grade 8

Cells, Tissues, Organs, and Systems
Optics
Fluids
Water Systems on Earth

Grade 9

Reproduction
Atoms and Elements
Characteristics of Electricity
Space Exploration

Senior High (Grades 10–12)

Integrated Science 10 (academic, 1 credit)

Course Code: 011138

The aim of the integrated science course is to heighten students' awareness and understanding of the relationships among science, technology, and society. The course is designed to provide students with the tools necessary to become scientifically and technologically literate. Scientific concepts and skills are taught in a social context that encourages active and meaningful learning among students.

Core topics include the nature of science and technology, research and development, mixtures, classification and concentrations, solutions, graphing, heat, light, electricity, Ohm's Law, Henry's Law, legal and moral decision making, logical reasoning, systems, and risk/benefit analysis.

Integrated Science 10 is designed to be a foundational science course that reflects the integration of biology, chemistry, and physics while emphasizing critical thinking, technological literacy, communication, and numeracy as well as personal and social values and skills.

NOTE: The Integrated Science 10 course is currently under review. Piloting will begin in 1999–2000 of a new curriculum developed collaboratively in the Atlantic provinces. The following outline, based on the *Pan-Canadian Common Framework of Science Learning Outcomes*, will be used in the grade 10 curriculum:

- ▶ Sustainability of Ecosystems
- ▶ Chemical Reactions
- ▶ Motion
- ▶ Weather Dynamics

Biology 11 and Biology 12

(academic, 1 credit each)

Course Codes: 011153 and 011156 respectively

Recommended prerequisite: a grade 11 biology course for Biology 12

NOTE: The *Atlantic Canada Biology* curriculum guides are currently being edited to bring them into alignment with the *Pan-Canadian Common Framework of Science Learning Outcomes*. A draft of the revised guide will be available for piloting at the grade 11 level only in 1999–2000.

Biology 11 and Biology 12 emphasize the science themes: change, diversity, energy, equilibrium, matter, and systems. These themes allow teachers to show students the connections within the science program and how individual sections of the program relate to the big ideas in science.

In addition to developing a solid understanding of fundamental science concepts and principles, Biology 11 and 12 have the goal of educating students about the nature of science and technology and the interaction between biology and technology. Students are made aware of the impact of biology and associated technology on society and of the limitations of the biological

sciences, science in general, and technology in solving societal problems.

Biology 11 consists of four units of study:

Unit 1: Biodiversity

Unit 2: Energy Flow and Cellular Matter

Unit 3: Energy and Matter Exchanged by Humans and other Organisms

Unit 4: Energy and Matter Exchange in Ecosystems

Unit 1 introduces the cell as a basic unit of life and explores the diversity of organisms in the biosphere and the unity among living things by organizational systems.

Unit 2 traces energy as it flows from the environment through photosynthetic and cellular respiration systems. Unit 2 also explores the associated cycling of matter in the biosphere.

Unit 3 examines those systems responsible for exchanging energy and matter with the environment, in addition to interacting with pathogenic organisms. The human organism is used as a principal model for this unit.

Unit 4 examines the characteristics of representative ecosystems and the interaction of organisms that mediate the flow of energy and matter through those ecosystems. Unit 4 also explores how organisms change to fill available niches.

Biology 12 consists of four units of study:

Unit 1: Systems Regulating Change in Humans and Other Organisms

Unit 2: Reproduction and Development

Unit 3: Chromosomes, Genes and DNA

Unit 4: Change in Populations, Communities and Species

Unit 1 introduces cells as specialized biochemical units that process various organic compounds. The human organism is used as the principal model in a detailed examination of the chemical and electrical systems that regulate change to maintain equilibria.

Unit 2 uses the human organism as the principal model for a detailed examination of how genetic, hormonal, and environmental factors cause change during the reproduction and development of organisms.

Unit 3 explores chromosomes, genes, and DNA and their responsibility for diversity and change in living systems. This topic is examined in detail over a wide range of organizational levels from molecular to organism.

Unit 4 explores equilibrium and change in population gene pools and the consequences of such change at the community, systems, and species level. The theory of evolution is included in this unit.

Advanced Biology 11 (advanced, 1 credit)

Course Code: 011155

NOTE: Advanced biology courses are currently under review.

In Advanced Biology 11, students are expected to engage in opportunities to construct major concepts in biology and to demonstrate and apply these concepts in new and novel situations. The content topics for this course should parallel the Biology 11 course, but the curriculum should be more investigative in nature and provide for greater depth of treatment. Students should also have more opportunities for independent study of certain biology topics.

Advanced Biology 12 (advanced, 1 credit)

Course Code: 011011

Recommended Prerequisite: A grade 11 biology course

NOTE: Advanced biology courses are currently under review.

Although Advanced Biology 12 is a logical follow-up to Advanced Biology 11, the latter is not considered a prerequisite. The core and optional topics for Advanced Biology 12 are the same as those for Biology 12.

Students enrolled in this course will have multiple opportunities for independent study of topics in depth, making special efforts to relate the ideas and processes of biological sciences to those of the physical sciences and the mathematical disciplines.

It is mandatory for students in Advanced Biology 12 to complete a significant independent research project which relies, for the most part, upon experimental investigations.

Chemistry 11 and Chemistry 12

(academic, 1 credit each)

Course Codes: 011149 and 011151 respectively

Recommended Prerequisites: mathematics and a grade 11 chemistry course (for grade 12 chemistry)

NOTE: The *Atlantic Canada Chemistry* curriculum guides are currently being edited to bring them into alignment with the *Pan-Canadian Common Framework of Science Learning Outcomes*. A draft of the revised guide will be available for piloting, at the grade 11 level only, in 1999-2000. The following outline will be used in grade 11 chemistry:

- From Structures to Properties
- Stoichiometry
- Organic Chemistry

Chemistry is a part of everyone's life. It is the study of the composition, properties, and interactions of matter. Chemical knowledge advances within a societal context, and it is important for students to realize that the principles and laws of chemistry are the results of extensive scientific observations and analysis and that, although science is a powerful tool, it also has limitations.

The high school chemistry program emphasizes the science themes: change, diversity, energy, equilibrium, matter, and systems. These themes provide a means for showing the connections within the science program and provide a framework for teachers to show students how individual sections of the program relate to the big ideas in science.

The program encourages students to participate in lifelong learning about chemistry and to appreciate chemistry as a scientific endeavour with practical impact on their lives and on society as a whole. The chemistry program is divided into two courses: the Chemistry 11 course builds on the fundamental attitudes, skills, and knowledge acquired in Science 10, while the grade 12 program provides a more in-depth exploration of various topics intended for students pursuing post-secondary chemistry.

Chemistry 11 consists of four units of study:

- Unit 1: Matter and Energy in Chemical Change
- Unit 2: Matter as Solutions and Gases
- Unit 3: Quantitative Relationships in Chemical Changes
- Unit 4: Chemical Bonding

Unit 1 investigates the changes in matter and energy that occur during chemical reactions.

Unit 2 focusses on the nature of matter, specifically, solutions and gases, by examining their properties, identifying patterns, and analysing changes.

Unit 3 explores the quantitative relationships in chemical reactions and provides opportunities for students to predict masses of substances reacted or produced as a chemical change.

Unit 4 extends models of atoms to models of bonding to examine how the properties of matter and theoretical explanations about its behaviour are linked.

Chemistry 12 consists of four units of study:

- Unit 1: The Diversity of Matter: An Introduction to Organic Chemistry
- Unit 2: Thermochemical Changes
- Unit 3: Equilibrium: Acids and Bases in Chemical Changes
- Unit 4: Electrochemical Changes (optional if time permits)

Unit 1 investigates organic compounds and compares organic compounds to inorganic matter.

Organic reactions in living and non-living systems are also investigated.

Unit 2 explores how heat, a form of energy, is absorbed or released in chemical reactions. Changes in physical and nuclear systems are explored for comparison.

Unit 3 explains that few chemical reactions proceed in only one direction and investigates chemical systems at equilibrium.

Unit 4 examines electrochemical systems, analyses oxidation-reduction systems, and quantifies the matter and energy involved.

Advanced Chemistry 11

(advanced, 1 credit)

Course Code: 011015

Recommended Prerequisite: Mathematics 421

NOTE: Advanced chemistry courses are currently under review.

Advanced Chemistry 11 takes an investigative approach to studying chemistry. Students are expected to engage in opportunities to develop major concepts in chemistry and to demonstrate and apply these concepts in new and novel contexts. The content topics for this course should parallel the Chemistry 11 course but should provide for greater depth of treatment.

Advanced Chemistry 12

(advanced, 1 credit)

Course Code: 011017

Recommended Prerequisites: Chemistry 11 or 531; Mathematics 431 or 432

NOTE: Advanced chemistry courses are currently under review.

Advanced Chemistry 12 is a continuation of the Advanced Chemistry 11 course. In addition to the topics from the Chemistry 12 course, it is mandatory that students complete a significant independent research project that relies, for the most part, on experimental investigations.

Earth Science 12 (graduation, 1 credit)

Course Code: 011024

NOTE: Earth Science 12 will not be offered after 1999-2000. Piloting will begin in 1999-2000 of a new course, Geology 12, that will replace it.

This earth science course aims to explain the earth to students through the geological sciences. This course examines mineral and energy resources, the history and structure of the earth and the changes it undergoes, and introduces economic geology and its effect upon the environment. The biology, chemistry, and physics learned previously will be reviewed, as necessary, and incorporated into this course.

Canadian Geology 12 (academic, 1 credit)

Course Code: 011023

NOTE: Canadian Geology 12 will not be offered after 1999-2000. Piloting will begin in 1999-2000 of a new course, Geology 12, that will replace it.

Canadian Geology 12 contains a balanced survey of the various aspects of the subject. Considerable emphasis is placed on Canadian and Nova Scotian environments.

Topics include composition of the crust (minerals, rocks, chemical composition, volcanoes, weathering, and mineral resources), erosion (down slope movement, rivers, wind, glaciers, shorelines, and ground water), internal processes (earthquakes, continents, oceans, and plate tectonics), and earth history, including reference to the solar system.

Oceans 11

(academic, 1 credit or ½ credit)

Course Code: 011158 (11A)

011200 (11B)

Oceans 11 is an academic course that satisfies the second science credit requirement for high school graduation. The Oceans 11 course is part of the *Expanded Course Options* program.

Oceans 11 offers students the opportunity to explore aspects of global and local oceanography

and current ocean-related issues. The course is designed to be flexible and meet the needs and interests of Nova Scotian students by connecting the study of oceanography with local economic and community interests. One of the priorities of the course is to increase students' knowledge of emerging new economies and opportunities in such areas as aquaculture and oceans management, which offer new career opportunities.

Oceans 11 consists of four 25-30 hour modules. Successful completion of four modules is required to earn one science credit. Successful completion of two modules is required to earn one half science credit.

Learning modules include the following:

Module 1	Our Coastal Zones—Managing Their Use
Module 2	The Marine Biome
Module 3	Oceans—Structure and Motion
Module 4	Aquaculture—Farming the Oceans
Module 5	The Fisheries Resource
Module 6	Coastal Navigation

Physics 11 and Physics 12 (academic, 1 credit each)

Course Codes: 011150 and 011152 respectively

Recommended Prerequisites: a grade 10 mathematics course for Physics 11 and a grade 11 mathematics and physics course for Physics 12.

NOTE: The Atlantic Canada Physics curriculum guides are currently being edited to bring them into alignment with the *Pan-Canadian Common Framework of Science Learning Outcomes*. A draft of the revised guide will be available for piloting at the grade 12 level in 1999-2000.

Physics 11 consists of four units of study:

- Unit 1: Kinematics
- Unit 2: Dynamics
- Unit 3: Energy and Momentum
- Unit 4: Waves

Unit 1 explores how forces, velocity, and acceleration can be measured and represented as vectors.

Unit 2 explores the relationship among force, mass, and acceleration, and the interaction of forces between two objects. The relationship among work, time, and power are analysed quantitatively.

Unit 3 explores momentum as it relates to an object's motion. Students will determine which laws of conservation of energy or momentum are best used to solve real life situations involving collisions.

Unit 4 explores the common characteristics of mechanical, sound, and light waves, and explains and predicts the behaviour of waves.

Physics is the branch of knowledge that studies the processes and structures of the natural world at the most fundamental level. Objects as small as atoms and as large as galaxies are investigated in an attempt to understand the underlying principles and structures. Physics is both descriptive and predictive: it can often explain how something works and predict how its related technologies can be improved.

The program is designed to challenge and engage students with a wide range of backgrounds to understand concepts and to apply their knowledge to new situations. The program, through its many hands-on, intellectually stimulating experiences, enables students to see connections between physics and other sciences, and to see how physical principles underlie many of the seemingly unrelated facets of their everyday world.

Physics 12 consists of five units of study:

- Unit 1: Linear Motion
- Unit 2: Forces
- Unit 3: Two-Dimensional Motion
- Unit 4: Impulse and Momentum
- Unit 5: Work and Energy

Unit 1 investigates the relationship between uniform and accelerated motion.

Unit 2 explains how forces can be measured and represented as vectors. Friction, cohesion, and adhesion are examined as forces that can effect change in an object.

Unit 3 allows students to study two-dimensional motion, such as projectiles, and to analyse the accelerated motion that results in a non-linear path.

Unit 4 explores momentum and impulse as they relate to an object's motion. Students will discover that momentum is conserved no matter how complex the interaction of an object's movement may be.

Unit 5 explores the relationship between work and energy and the ways energy in a system can be changed by doing work. Students will learn that energy of an object or system remains constant as transformation takes place.

Advanced Physics 11 (advanced, 1 credit)

Course Code: 011020

Recommended Prerequisite: Mathematics 421

NOTE: Advanced physics courses are currently under review.

Advanced Physics 11 takes an investigative approach to studying physics. Students are expected to engage in opportunities to develop major concepts in physics and to demonstrate and apply these concepts in new and novel contexts. The content topics for this course should parallel the Physics 11 course but should provide for greater depth of treatment.

Advanced Physics 12 (advanced, 1 credit)

Course Code: 011022

Recommended Prerequisites: Physics 11 or 531; a grade 11 physics course and Mathematics 431 or 432

NOTE: Advanced physics courses are currently under review.

Advanced Physics 12 is a continuation of the Advanced Physics 11 course. In addition to

exploring the topics from the Physics 12 course, students will engage in a major individual research project.

Teaching Guides

Foundation for the Atlantic Canada Science Curriculum (1998)

Elementary Science Program, Curriculum Framework

Science in the Junior High Schools (No. 98, 1987)

Atlantic Provinces Biology 11, 12 (1996)

Atlantic Provinces Chemistry 11, 12 (1996)

Atlantic Canada Chemistry Curriculum, Chemistry 11 (Implementation Draft, June 1999)

Atlantic Provinces Physics 11, 12 (1995)

Atlantic Canada Physics Curriculum, Physics 11 (Implementation Draft, June 1999)

Geology 241 (No. 9, 1977)

Geology 441 (No. 38, 1978)

Geology 12 (Draft, 1999)

Integrated Science 10 (No. 136, 1993)

Oceans 11 (1999)

Supplementary Documents

Safety in the Chemistry Laboratory (No. 47, 1984)

A Safety Manual for Science Laboratories and Classrooms (No. 48, 1984)

Safety In-Service Bulletin (No. 49, 1984)

Biohazardous Safety Manual

Secondary Science: A Teaching Resource (1999)

SOCIAL STUDIES

Implementation of *Foundation for Atlantic Canada Social Studies* will begin in September 1999. This document will provide the framework for future social studies curriculum development in Nova Scotia.

The primary aim of the social studies program is to equip students with a body of knowledge, a repertoire of skills, and an understanding of the perspectives, values, and attitudes that will enable them to understand and contribute to the social, cultural, economic, and political environments in which they will function. This component of the public school program has a particularly vital contribution to make in the areas of citizenship, global education, sustainable development, multiculturalism, anti-racism, and gender education.

A well-balanced social studies program addresses the roles of individual social science disciplines as well as the relationships among the disciplines. It gains strength through the integration of knowledge and skills of other disciplines, such as mathematics, the physical sciences, the language arts, and technical arts. It also benefits from the use of a wide range of resources that expose pupils to a variety of points of view and information-processing experiences.

Elementary (Primary-Grade 6)

NOTE: The social studies program for grades primary to 6 is currently under review and development, with piloting planned for September of 2001 and implementation beginning in September 2002.

The elementary level social studies program combines local, national, and global components and provides both for studies of those elements familiar to the students—home, school, neighborhood, community—and for studies of other homes, neighborhoods, communities, and regions in Canada and elsewhere. A multi-spiral approach provides the national and global aspects needed to help students understand the interdependence of all peoples.

The program is based on the concepts of identity, socialization, environment, change, resources, human needs, institutions, interdependence, values, and decision making. Four basic groups of attitudes—self-awareness, respect for others, awareness and acceptance of uncertainty, and respect for the natural environment—are a part of the total social studies program at the elementary level.

As well as being geographically and historically oriented, the program includes aspects of sociology, anthropology, economics, and political science.

The work of each grade level is divided into a number of units with objectives, suggested activities, and resources identified for the various units.

The themes, with their unit titles, are

Primary: Orientation

- Unit I — Who am I?
- Unit II — What is my school like?
- Unit III — Who are the members of a family and how do they help each other?
- Unit IV — What is a neighborhood?
- Unit V — Why do we need rules?

Grade 1: Families

- Unit I — What is a family?
- Unit II — What are basic and human needs and how are they satisfied?
- Unit III — What is my school like?
- Unit IV — Who are the people in my neighborhood and other neighborhoods?
- Unit V — Why are rules needed?

Grade 2: Community/Communities

- Unit I — What is a community?
- Unit II — How do people in a community earn their living?
- Unit III — How do people "belong" to a community?
- Unit IV — How do people and communities celebrate special days/holidays?
- Unit V — How do communities depend on each other?

Grade 3: Canadian Communities

- Unit I — What is a community? (continuation)
- Unit II — What are the basic map and globe skills?
- Unit III — How are Canadian communities similar to and different from each other?

Grade 4: People and Their Changing Environment

- Unit I — How do we learn about the past?
- Unit II — How have some communities changed?
- Unit III — How do changes in technology change society?
- Unit IV — How have transportation and communication changed through time?
- Unit V — How have roles and values changed over the years?
- Unit VI — What is pollution, and how does it affect us? (optional)

Grade 5: Canada and the World's People

- Unit I — What are some of the main physical features and political divisions of Canada and the world?
- Unit II — Who were some of the explorers and where did their explorations take them?
- Unit III — What is life like in selected areas of the world?
- Unit IV — What are some of the factors which influence population?
- Unit V — What are some of the ethnic/cultural groups in Canada?

Grade 6: Nova Scotia (and Atlantic Canada)

- Unit I — Who were the first known inhabitants, and how did they use the environment to meet their needs?
- Unit II — Who were the early European explorers of Atlantic Canada, and why were they important to the Europeans?
- Unit III — Why did European people settle and fortify Nova Scotia (and Acadia)?

- Unit IV — What is meant by multiculturalism, and why is it of interest and value to us in Nova Scotia?
- Unit V — How has the physical environment influenced the way people lived and are living?
- Unit VI — What is meant by "service industry," and how important are these industries to Nova Scotia?
- Unit VII — What is meant by "government," and why do we have government? (optional)

Development of the units calls for integration with language arts, music, physical education, health education, science, mathematics, and other subjects. The use of community resource people for many units, especially for units involving the culture of ethnic groups, is recommended.

Learner assessment is carried out on a daily basis through observation of individual and group work. Observation may be made of classroom projects, field trips, research, discussion, teacher-made tests, and reports that include writing, drawing, or making model forms.

Junior High (Grades 7-9)

NOTE: The grade 7 and 8 social studies program is currently under review and development, with piloting planned for September 2001 and implementation beginning in September of 2002.

The grade 7 and 8 social studies program integrates history and geography to show how settings and people interacted to create the story of Canada's past. It also examines the form and function of municipal and provincial government in Canada.

An integrated social studies program is offered in grade 9 through the Atlantic Canada in the Global Community course. A political science unit in this course completes the civics strand with an examination of government at the federal level.

Throughout the junior high social studies program, students should expand their knowledge of facts, understanding of concepts, and ability to think and reason. They should have opportunities to examine attitudes and values. Students should

leave junior high with a clearer understanding of the different perspectives the social studies disciplines use to examine society. They should understand the relationships between these disciplines. They should understand the process of cause and effect, the role of and sources for research, and the distinction between fact and opinion.

The social studies program shares, with all other programs, the responsibility of helping students use language to develop their thinking through reading, writing, speaking, and listening.

The program is an important means of educating students to respect the dignity, rights, and humanity of all persons and of promoting the principles for anti-racism, multiculturalism, interculturalism, and gender equity.

The social studies program also encourages students to consider stewardship of the natural environment as a personal responsibility.

Grade 7

The geographical setting for social studies in grade 7 is the northern hemisphere, with the principal focus being on the North Atlantic and eastern North America. The historical component encompasses the period stretching from the peopling of North America to the Canadian Rebellions of 1837. The civics unit deals with municipal government.

The units in this program include the following: Introduction to Social Studies; Geographical Skills to Study North America; Early Peoples in North America; The Far North; The Arrival of the Europeans—Early Explorers; Early French Settlements; St. Lawrence-Ottawa Lowland; Early English Settlements; When Empires Collide; British in North America After 1763; The Great Lakes Lowlands; The War of 1812 (optional); The Great Migration; The Near North; Municipal Government; and Responsible Government.

Grade 8

In grade 8 social studies, the geographical component expands to include the entire North American continent. The historical content embraces Canada from 1837 to the present.

Government at the provincial level is the focus of the civics unit.

The 13 units in this program include the following: Broadening the Horizon; The Evolution of Responsible Government; Confederation; Western Expansion; Agricultural Development in the West; World War I; Between the Wars; Industrialization and Urbanization; World War II and Its Aftermath; Provincial Government; Key Political Events and Personalities (beginning 1949); Becoming a Multicultural Nation; Selected Economic, Social and Cultural Changes (optional).

Atlantic Canada in the Global Community (Grade 9)

This grade 9 social studies course enables students to study their region in a global context. Beginning with an examination of the physical landscape, the course focusses on the human landscape of Atlantic Canada and global connections.

There are five interrelated units:

- ▶ Physical Setting
- ▶ Culture
- ▶ Economics
- ▶ Technology
- ▶ Interdependence

This course offers multiple opportunities for students to examine their region in terms of physical landscape, culture and cultural diversity, economic activity and technology, and the effects of technological change. Interdependence is the key unifying concept.

Senior High (Grades 10–12)

At the senior high level, students have the opportunity to pursue in depth the following disciplines: history, geography, economics, sociology, political science, and law.

In the senior high social studies program, students must be given the opportunity to enlarge their body of knowledge and to continue to develop their range of appropriate skills. Through the independent use of libraries and of print, photographic, electronic, and other media,

students should be given the opportunity to pursue research projects that supplement the classroom experience.

The aims of historical study at the senior high level include the following: to practise the skills of research and inquiry; to acquire a body of knowledge pertinent to a particular area of study; to appreciate the nature of evidence and the role of perspective; to understand cause and effect and the relationships among major historical periods, events, situations and conditions; and to understand the role of the past in the present.

History courses at the senior high level are sequenced so that students can pursue a sequential program of historical study if they so choose. Grade 10 ancient/medieval history is a sound preparation for grade 11 modern European history. The grade 12 global history course completes the sequence.

The study of senior high geography addresses the nature of the planet and the forces that did and do shape it; the human settlement of the planet and the patterns that settlement reveals; the interaction of humanity and the environment; and the methods and resources geographers use to study these. Senior high geography is founded upon the themes of modern geography: location, region, pattern, spatial interaction, human/environment interaction, and culture. It is also founded upon the skills of geography, which include data collection, processing, and interpretation.

African Canadian Studies 11

(academic, 1 credit)

Course Code: 012218

The African Canadian Studies course focusses on the history of people of African descent in Canada. It is presented in a challenging, dynamic, and interesting manner. It is divided into four basic units:

Unit 1

Part A: Pre-investigation

What is Culture?

How is it an Afrocentric Course?

Part B: Pre-colonial African Societies

Unit 2

Transcontinental Movement: Evolution and Change of the African Diaspora

Unit 3

Pursuit of Political and Economic Empowerment

Unit 4

Part A: Local Community Study

Part B: Challenges Facing Today's Youth

This course is designed to equip students with a sound understanding of the global experience, local achievements, and contributions of Canadian people of African descent. It uses the disciplines of geography, history, economics, political science, and sociology to highlight the experiences, struggles, and life stories of people of African descent who have contributed to world history.

Designed to be inclusive, African Canadian Studies 11 will appeal to learners of all ability levels and ethnic and racial backgrounds.

NOTE: Economics 11 and Economics 12 are currently under review and development with piloting planned for 1999-2000. Economics 12 is being reviewed as Global Economics 12.

Economics 11 (academic, 1 credit)

Course Code: 012023

This course in Canadian economics begins with a general study of the economy of the local community, leading into such selected aspects as important private firms, important occupational groups, local unions, three levels of government, government spending, taxation; and expanding to the provincial and regional economy to consider primary, secondary, and tertiary industries. Distribution of wealth and power, labor movement, free enterprise, crown corporations, taxation, and economic ties with the world are also considered as parts of the Canadian economy. Various economic principles, issues, and theories that affect the lives of students are included.

Economics 12 (academic, 1 credit)

Course Code: 012024

This course in national/international economics is an extension of Economics 11. It provides a deeper study of selected economics issues as well as consideration of certain theories. The unit on microeconomics considers such topics as demand and supply, product differentiation, production, and markets. Macroeconomics considers national accounts; economic indicators and government policy; money, banking, and finance; and economic growth. There are also three optional units: history of economic ideas; international economy; and comparative economics.

Geography 10 (academic, 1 credit)

Course Code: 012223

This grade 10 geography course deals with physical geography. This course has two sections. Part A, Graphic Environment, helps students develop an understanding of and practical experience in constructing, using, and interpreting some of the image, map and graphing skills geographers commonly use to analyse the environment. Part B, The Physical Environment, deals with the various land, ocean, and atmospheric processes that are at work sculpting the face of the earth. These processes illustrate that Earth's ecosystems are in delicate balance and require careful stewardship.

Eight units comprise the Physical Geography course:

Part A

Unit 1: Data Collection

Unit 2: Data Processing and Representation

Unit 3: Data Interpretation and Utilization

Part B

Unit 1: Geographic Perspective

Unit 2: Land Environment

Unit 3: Ocean Environment

Unit 4: Atmospheric Environment

Unit 5: A Small Blue Planet

Geography of Asia 10 (academic, 1 credit)

Course Code: 012016

This course, which focusses on the geography of Asia, enables students to develop an understanding of the human and physical landscape of Asia by applying geographic skills, concepts, and perspectives. Units include (the former) Soviet Union and Mongolia; Southwest Asia (Middle East); South Asia (Indian Subcontinent); East Asia (China and Japan); and Southeast Asia.

Geography 11 (academic, 1 credit)

Course Code: 012019

NOTE: Geography 11 is currently under review and development, with piloting planned for 2000–2001. Courses in Geomatics 12 and Geography of the Pacific Rim 11 are also in development, with piloting planned for 2000–2001.

Geography 11 covers contemporary Canadian geography with its regional and cultural diversities and includes a systematic examination of such general characteristics as Canada's vast area, its northern character, its climate, and its economic development. In the first half of the course, Canada is studied both in the context of its continental North American setting and through its component regions and sub-regions. The second half provides a thematic treatment of such topics as pollution, urbanization, resource development, changing technology, and rural life.

**Geography of Canada 11
(graduation, 1 credit)**

Course Code: 012020

This course, which focusses on the geography of Canada, is designed to give students a sense of Canada's wide variety of natural and cultural landscapes, while at the same time giving them an understanding of the Canadian identity that makes Canadians different from people in other areas.

Regional units to study are the following: The Atlantic Region; The Great Lakes—St. Lawrence Lowlands; The Canadian Shield; The Continental

Interior; Western Mountains and Coasts; and The Far North. Local field work and research are an important part of this course.

Geography 12 (academic, 1 credit)

Course Code: 012021

The aim of this course, which focusses on settlement geography, is to increase the student's understanding of the spatial organization of urban and rural settlement and settlement systems and the ways these evolve, both inside and outside Canada. The course also shows students how order exists in human-environment relationships; how historical developments have influenced settlement patterns; and what impact urbanization processes have had and continue to have upon rural areas. Units include Urban Settlement, Rural Settlement, Rural-Urban Interaction, and Community Analysis and Planning, with special emphasis given to Atlantic Canada.

It is strongly recommended that the students have prior knowledge of both physical geography and the geography of Canada before studying this course.

Global Geography 12 (academic, 1 credit)

Course Code: 012209

This course, which focusses on global geography, explores major themes that help us to understand the nature and origins of complex humanity/environment relationships in the contemporary world.

Guided by the fundamental themes and skills of modern geography, students pursue this exploration through eight compulsory units: Our Fragile Planet: A Geographical Perspective; Perilous Processes: Our Planet at Risk; The Peopled Planet: Standing Room Only?; Feeding the Planet: Food for Thought; Global Resources: The Good Earth; Global Factory: For Whose Benefit?; Urbanization: A Mixed Blessing; and The Future Planet: Under New Management.

By using geographic skills and techniques, learning and applying a body of skills and techniques, learning and applying a body of geographic knowledge, and developing their own

planet management awareness, students become informed global geography students. The process of becoming informed enables students to propose reasonable answers to the question upon which Nova Scotia's global studies courses are built—"How did the world arrive at its current state at the close of the twentieth century?"

History 10 (academic, 1 credit)

Course Code: 012008

This course, which focusses on ancient/medieval history, allows students to develop an understanding of the concept of civilization by examining the origins of civilization and comparing some civilizations that have contributed to the nature of the modern world.

The course has six broad chronological divisions: The Evolution of Human Beings; The Birth of Civilizations (including Mesopotamia, Egypt, China, Africa, and the Americas); Greece; Rome; The Middle Ages; and The Renaissance and Reformation. Each of these divisions can be considered from a number of points of view, including geography, archaeology, society, language, religion, and politics. Major themes could be developed spanning the broad chronological period (for example, agriculture, development of government, religion, and revolutions).

History 11 (academic, 1 credit)

Course Code: 012009

This course, which focusses on the history of Western Europe, examines the emergence of Europe on the international scene. Starting with the age of European exploration and discovery, students trace the rise and fall of European powers in the seventeenth, eighteenth, nineteenth, and twentieth centuries. Themes include absolutism, nationalism, imperialism, colonialism, and industrialization. Key concepts include the notions of progress, power, and rights of the state, the group, and the individual. All of these emerge from the examination of key events, conditions, and individuals whose impact was significant in the emergence of the modern western world.

Twentieth-Century History 11 (graduation, 1 credit)

Course Code: 012010

This course, focussing on the twentieth-century world, examines significant events in the world in the present century. The significant events of the twentieth century are examined in their historical context.

Events involving many areas of the world (e.g., World War I, the Depression), as well as events and topics involving selected areas (e.g., emerging countries in Africa), should be included.

Global History 12 (academic, 1 credit) Course Code: 012169

This course, which focusses on global history, examines major themes in the history of the post-World War II era. Students examine these themes in five compulsory units: East-West: The Role of Super Power in the Post-World War II Era; North-South: The Origins and Consequences of Economic Disparity; The Pursuit of Justice; Societal and Technological Change; and Acknowledging Global Interdependence: The Legacy of the Twentieth Century. In their study of these units, students examine history from three perspectives—social, economic, and political—and use the research and inquiry skills of the historian.

Throughout their studies, students address the focus question of the course: "Has humanity emerged into a world whose actions are governed more by interdependence at the global level than by dependence or independence at the national or international level?" They also propose reasonable answers to the question upon which Nova Scotia's global studies courses are built: "How did the world arrive at its current state at the close of the twentieth century?"

History 12 (academic, 1 credit) Course Code: 012011

This course focusses on the history of North America/Canada. At present, teachers have a

choice of four different approaches to this course: (1) a survey course on North American history; (2) Canadian-American relations; (3) Canadian history from the centralist point of view; and (4) Canadian history from a Maritime perspective.

Emphasis should be placed on the political, constitutional, and selected military aspects of Canadian history, without ignoring economic, social, and cultural aspects. Selected topics currently important in Canada (e.g., the constitution, Canadian unity, Quebec) should be given careful consideration.

Canadian History 12 (graduation, 1 credit) Course Code: 012012

This course, which focusses on Canadian history, considers the social, cultural, and selected economic aspects of Canadian history. Selected political, constitutional, and military aspects should also be considered, according to the needs, interests, and abilities of the students.

Related aspects of American history should be included, as well as Atlantic Canada's role in Canadian events. There should be a balance of topics between the pre- and post-confederation periods.

Law 12 (academic, 1 credit) Course Code: 012028

The Canadian law course is designed to provide students with a knowledge of law and its function in society and the opportunity to develop skills and attitudes that will enable them to understand the process of law. Topics include the Canadian legal system, crimes and crime control, injuries and wrongs, human rights, property rights, promises and agreements, business relations, family relations, and courts and trials.

Mi'kmaq Studies 10 (academic, 1 credit) Course Code: 012226

Mi'kmaq Studies 10 provides students with an understanding of historical and contemporary issues in Mi'kmaq society. The course considers

the cultural, social, spiritual, and political events, trends, and traditions in the history of the Mi'kmaq.

The course uses an issue-based approach and considers broad concepts such as justice, self-determination, political autonomy, education and schooling, the family, social and political organizations, native rights, spiritual principles, and personal/group identity.

Students analyse historical and contemporary issues in Mi'kmaq society, which enables them to achieve a greater understanding of and respect for Mi'kmaq contributions to society.

Political Science 12 (academic, 1 credit)

Course Code: 012093

This political science course is a three-part course, with Part 3 being optional. Part 1 develops an understanding of the concept of politics, Part 2 develops an understanding of Canadian politics in its many aspects, and Part 3 involves a comparative study of democratic and other systems of government.

Sociology 12 (open, 1 credit)

Course Code: 012027

This sociology course is designed to give an understanding of the basic aspects of sociology. It allows students to examine Canadian sociological issues and to participate in a local community/sociological project. Canadian sociological issues that might be considered include the family, students and schools, poverty, minority groups, women in society, labor and management, conflict, crime in Canada, punishment and rehabilitation, and the future.

Teaching Guides

Social Studies for Elementary Grade Levels
(No. 77, 1981)

Grade 7 and Grade 8 Social Studies (draft guidelines)

Atlantic Canada in the Global Community
(Grade 9) (1998)

Mi'kmaq Studies 10 (No. 169, 1998)

History: Grades 10-12 (Draft)

Grade 10 Ancient/Medieval History (draft guidelines)

African Canadian Studies 11 (draft)

Global History 12 (No. 132, 1993)

Geography, Grades 10-12 (No. 39, 1979)

Geography 10 (No. 143, 1996)

Global Geography 12 (No. 131, 1993)

Sociology 341 (No. 14, 1978)

Economics 331, 441 (No. 15, 1978)

Political Science 441 (No. 17, 1978)

Law in High School (No. 10, 1978)

Foundation for the Atlantic Canada Social Studies Curriculum (1999)

TECHNOLOGY-RELATED EDUCATION

Information Technologies

The Department of Education's *Vision and Learning Outcomes for the Integration of Information Technologies within the Nova Scotia Public School Programs* describes what students should understand and be able to do as a result of the integration of information technologies within curriculum programs. The document is currently available on the EDnet Web site in both static and interactive forms. Illustrative examples reveal how students can and do accomplish the learning outcomes. Illustrative examples assist teachers as they integrate information technologies, including computers, for significant learning purposes and practices.

Elementary (Primary-Grade 6)

Learners at the elementary level should have access to the computer as a tool for expressing themselves in writing, for illustrating, and for developing thinking. The intention is not to offer a separate computer unit or course at the elementary level. Rather, a computer should be among the tools available to a learner to use when appropriate.

Junior High (Grades 7-9)

Learners in the junior high years should begin to formalize their experiences and understanding of microcomputer technologies. In these years, students are expected to

- ▶ become confident and knowledgeable users of a microcomputer and its peripheral components
- ▶ continue using a microcomputer for written communication
- ▶ use the microcomputer to store, retrieve, and manipulate information
- ▶ develop an understanding of the issues surrounding evolving technologies

Computer education is not a subject area like mathematics or science or language arts. Rather, it concerns the acquisition and development of a

collection of skills, attitudes, and knowledge that together enhance the learning and teaching of the full curriculum.

Reinforcement of the early experiences and extensions of these experiences could take place in grade 8. By grade 9, students should be able to produce written work using word processing and presentation software. Before the end of grade 8, students should be introduced to the use of a database system using curriculum-based data and information.

Senior High (Grades 10-12)

Students in Computer-Related Studies 11 and 12 are expected to

- ▶ select and use appropriate computer technology and applications to assist their learning
- ▶ demonstrate problem-solving skills using computer technology
- ▶ demonstrate an understanding of the impact of computer technology in society

Computer-Related Studies 11 (open, 1 credit)

Course Code: 100037

NOTE: Computer-Related Studies 11 will not be offered after 1999-2000.

Computer-Related Studies 11 is an open course designed for all students. The course's major focus is on developing the ability to use applications software to solve real-world problems. Little or no time will be given to developing the ability to program a computer using a programming language.

The course helps students develop capability with personal word processing and database management types of software and an awareness of the nature of electronic communications and electronic spreadsheets.

Computer-Related Studies 12

(academic, 1 credit)

Course Code: 100038

Computer-Related Studies 12 is designed for students who have an interest in the study of computers and a desire to maximize the use of technology in their lives. This course may assist students planning to pursue post-secondary studies in this and related areas. The focus of the course is on students developing the ability to formulate and solve real-world problems using a structured problem-solving approach. Students develop this ability by using applications programs and by creating programs using a structured programming language.

Technology Education

The Atlantic provinces have begun the development of a framework document, *Foundation for Technology Education*. The junior high technology education program will be revised in 1999-2000. The new curriculum will balance skill development with applications and will focus on problem solving.

When students are successful in the technology education program, they are able to

- ▶ demonstrate how industry and technology affect the world of the past and present
- ▶ demonstrate the value of and problems with developing good design
- ▶ speculate on possibilities for modified or new products, systems, and environments
- ▶ model graphically, in three-dimensional form, what is present in the mind's eye
- ▶ plan and organize effective procedures and appropriate resources
- ▶ appraise products, systems, and environments commonly found in industry and technology
- ▶ demonstrate the effects of positive and negative aspects of the technological society
- ▶ develop strategies for dealing with technological challenges
- ▶ develop manipulative skills and safe practices involving a range of tools, machines, equipment, materials, and processes to achieve outcomes of good quality that have

been well-appraised at each stage of their development

- ▶ demonstrate understanding of the professional, technical, and trade occupations in the industrial and technological sectors of society
- ▶ demonstrate co-operation, useful work habits, self-esteem, initiative, drive, patience, self-discipline, and enterprise

The program provides students with both an orientation to technology and activities to develop technical skills. As a result of the program, students will demonstrate a broad set of intellectual and social abilities needed to solve problems and make value judgments about using technology in their own world. Through this approach, students will develop creativity, reasoning, and the ability both to communicate and make decisions.

Teachers should encourage students to undertake meaningful activities that are firmly based in the world beyond school. In addition to satisfying the students' urge to produce a finished product, the activities should challenge students to develop their thinking.

Technology activities should lead students to investigate three major questions:

- ▶ Why has technology developed as it has?
- ▶ How was it developed?
- ▶ What happens as technology is developed?

Research and development, trouble shooting, simulation, and constructing all involve problem solving. Students who can solve problems will become independent learners, thinkers, and decision makers. The career and working environments of the twenty-first century will require people who are skilful, innovative, able to adapt to change, and who know how to tackle problems.

At all levels of the technology education program, a variety of problem-solving opportunities should be developed involving different contexts and technologies. Students should be involved in producing models to illustrate and facilitate their problem solving. It is important that students work

primarily with wood, metal, and plastics, integrating these materials where possible. Different technologies and systems should also be involved as students pursue various needs and ideas. Each activity should give students the opportunity to create something that works, that is aesthetically pleasing, and that serves a real need in their world.

Junior High (Grades 7-9)

Features of the junior high program are as follows:

- ▶ design-and-make tasks and technology-learning activities for each grade level
- ▶ a compulsory sketch-and-draw unit that includes computer-aided drafting

The guidelines provide suggestions to help teachers design their own design-and-make tasks and technology-learning activities within the outcomes framework.

The junior high guidelines provide detailed information on the following topics:

- ▶ aims of the Technology Education Program
- ▶ problem solving
- ▶ safety
- ▶ students with special needs
- ▶ gender and multicultural approaches
- ▶ possibilities for integrating with other disciplines
- ▶ student progress assessment
- ▶ resources

Senior High (Grades 10-12)

Exploring Technology 10 (open, 1 credit)

Course Code: 006035

This technology course provides students with hands-on activities and introduces them to a broad spectrum of technological concepts. By the end of the course, successful students are able to use a range of technical applications, integrate technological with other academic disciplines, create devices and systems to satisfy their needs, explain how technology affects society, and use technology in problem-solving situations.

Construction Technology 10

(open, 1 credit)

Course Code: 006036

The construction technology course helps develop in students an understanding of construction technology, of its applications related to the basic human need for shelter, of the organization of construction, and of construction's impacts on society. The course offers technology-learning activities involving a simulated dome construction project, the computer simulation of the construction of a city, and the design problem-solving simulation of the construction of a fixed link between Nova Scotia and Prince Edward Island. Materials are also provided about leading architects and designers in Canadian construction as well as ideas for correlating the course with other subject areas. The course outline also includes ideas for a student enterprise.

Design 11 (academic, 1 credit or ½ credit)

Course Code: 327021 (11)

327016 (11A)

327017 (11B)

Design 11 involves students in using communications and information technologies to develop solutions to design problems and to conduct inquiries into design issues. Students work independently and as part of design teams to explore design in a range of practical contexts. Modules for this course include the following: Design Fundamentals; Communications Design; The Built Environment; Product Design; and Design Team or Independent Project.

Electrotechnologies 11

(academic, 1 credit or ½ credit)

Course Code: 327022 (11)

327018 (11A)

327019 (11B)

Electrotechnologies 11 enables students to gain an understanding of electrical and electronic systems and subsystems. Students explore a broad range of technology applications, for example, electric motors, appliances, audio, and video devices, sensors, control devices, security systems, and control systems. Modules for this course include

the following: Electro-assembly; Power Distribution and Conversion; Control Systems; Digital Technology; and Design Team or Independent Project.

Energy, Power, and Transportation 11
(open, 1 credit)

Course Code: 006041

By the end of the energy, power, and transportation course, students are able to demonstrate in a variety of ways an understanding of different forms of energy, the ways energy is harnessed, and the application of energy to modern day transportation systems.

Communications Technology 11 and
Communications Technology 12

(open, 1 credit each)

Course Code: 006037 and 006038 respectively

By the end of each communications technology course, students are able to demonstrate in a variety of ways knowledge and applications of different modes of communication, including audio, visual, graphic, electronic, and computer communications.

Production Technology 11 and
Production Technology 12

(open, 1 credit each)

Course Code: 006039 and 006040 respectively

By the end of each production technology course, students are able to demonstrate the process required to create a product using a variety of materials and methods. Entrepreneurship is an integral part of the grade 12 course.

Teaching Guides

Computer Related Studies, CRS 11 and CRS 12
(No. 142, 1995)

Vision for the Integration of Information Technologies within the Nova Scotia Public School Program (available only on the Internet and from Learning Resources and Technology)

I.A. Technology, Junior High School Level
(No. 139, 1993)

Communications Technology (No. 147, 1996)

Production Technology (No. 148, 1996)

Exploring Technology (No. 130, 1992)

Construction Technology (No. 127, 1991)

Energy, Power, and Transportation (No. 146, 1996)

Design 11 (1999)

Electrotechnologies 11 (1999)

Supplementary Documents

Industrial Arts Resource Book 2, Design Technology (No. 53, 1985)

Industrial Arts Resource Book 3, Technology Education (No. 57, 1988)

Industrial Arts Technology Education, CAD Tutorials (No. 59, 1990)

PUBLICATIONS AND RESOURCES



PUBLICATIONS AND RESOURCES

AUTHORIZED LEARNING RESOURCES

Details regarding the provision of authorized learning resources are available in the publication *Authorized Learning Resources, Integrated Catalogue/Order Form*. This publication provides information on the authorized learning resources and gives instructions for ordering.

During the year, supplements to the *Authorized Learning Resources, Integrated Catalogue/Order Form* are published. These supplements are accompanied by notes that provide descriptions of each of the newly listed titles, those titles that are scheduled for delisting, and those that have recently gone out of print and are no longer available for purchasing.

TEACHING GUIDES

The Atlantic Canada Framework for Essential Graduation Learnings in Schools
Foundation for Grade Primary Program
(April 1999)

Current and Emerging Research on Successful Junior High School: The Middle Years

Arts Education

Art, Grades 7-9 (No. 21, 1977)
Art, Grades 10-12 (No. 43, 1979)
Dance 11 (1999)
Drama 10 and Drama 11 (1999)
Music Primary to Four (No. 76, 1981)
Junior High School Music (No. 124, 1992)
Senior High School Music (Academic) (No. 115, 1990)
Senior High School Music (Instrumental) (No. 116, 1990)
Senior High School Music (Choral) (No. 117, 1990)
Canadian Music Studies (CMU 331) (1985)
Foundation for Arts Education Curriculum (Validation draft, 1998)

Cultural Industries 11 (Draft, 1999)
Visual Arts, Grades P-6 (2000)

Business Education

Accounting (No. 54, 1980)
Business Communications (No. 66, 1980)
Business Organization and Management (No. 62, 1980)
Business Personnel Development/Academic 12 (No. 119, 1990)
Business Mathematics (No. 83, 1984)
Consumer Education (No. 25, 1977)
Law in High School (No. 10, 1978)
Recordkeeping (No. 56, 1980)
Shorthand and Transcription (No. 57, 1980)
Word/Information Processing/Academic 12 (No. 120, 1990)

Community-Based Education

Co-operative Education and Work Experience in the Public Schools (Supplementary Document No. 60, 1990)

Core French

Français de base à l'élémentaire, 4^e à la 6^e année (1998)
Français de base au secondaire 1^{er} cycle, 7^e à la 9^e année (1999)
Français de base au secondaire 2^e cycle, 10^e, 11^e, 12^e année (1999)

English Language Arts

Foundation for the Atlantic Canada English Language Arts Curriculum (1996)
Using What We Have Learned: A Professional Development Resource for Elementary Language Arts (1997)
Using What We Have Learned: A Professional Development Resource for Senior Language Arts (1997)
The Supportive Classroom: Literacy for All (1991)

Everything That Counts: Portfolio Assessment in the Junior High School (1994)
 English Language Arts, Grades Primary-3 (1997)
 English Language Arts, Grades 4-6 (1997)
 English Language Arts, Grades 7-9 (1997)
 English Language Arts, Grades 10-12 (1997)
 Canadian Literature 12 (1998)

Entrepreneurship

Entrepreneurship 12 (1995)

Family Studies

Family Studies, Grades 7-12 (No. 133, 1993)

French Immersion

Programme d'études de français immersion - maternelle à la 3^e année (No 166, version provisoire 1998)
 Programme d'études de français immersion -3^e à la 6^e année (No 167, version provisoire 1998)
 Apprentissage et enseignement en immersion tardive (No 154, document provisoire, 1996)
 Programme d'études du cours de français, immersion tardive - 7^e, 8^e et 9^e années (No 155, document provisoire, 1996)
 Programme d'études du cours de français en immersion au deuxième cycle du secondaire (document provisoire, 1999)

Health Education

Elementary School Health, A Program Promoting Active and Healthy Lifestyles (No. 28, 1992)
 Foundation for Active, Healthy Living: Physical and Health Education Curriculum (1997)

Gaelic

Gaelic 10 (Pilot Draft, 2000)

Other Languages

Español, Guidelines for the Teacher (No. 4, 1976)
 German, Grades 10-12 (No. 11, 1974)
 Latin Grades 9 to 12 (No. 40, 1979)

Supplementary Document

Guidelines for the Treatment of Grammar, Supplement to German, Grades 10-12 (No. 1, 1977)

Mathematics

Foundation for Atlantic Canada Mathematics (1996)
 Atlantic Canada Mathematics Curriculum: Grades Primary-3 (1998)
 Atlantic Canada Mathematics Curriculum: Grades 4-6 (1996) (Draft)
 Atlantic Canada Mathematics Curriculum: Grade Seven (1999)
 Atlantic Canada Mathematics Curriculum: Grade Eight (1999)
 Atlantic Canada Mathematics Curriculum: Grade Nine (Implementation Draft, 1999)
 Atlantic Canada Mathematics 10 (Implementation Draft, June 1999)
 Atlantic Canada Mathematics Foundations 10 (Implementation Draft, June 1999)
 Atlantic Canada Mathematics 11 (available September 2000)
 Atlantic Canada Mathematics 12 (available February 2001)
 Atlantic Canada Pre-calculus 12 (available September 2001)
 Interim Guidelines for Mathematics 200 Programs (1990-91)
 Outlines for MAT 431, MAT 432, MAT 441, MAT 442

Personal Development and Career Education

Personal Development and Relationships, Grades 7, 8, 9 (No. 125, 1992)
 Educational and Career Explorations, Grade 7 (No. 99, 1987)
 Education and Career Explorations, Grade 8 (No. 103, 1987)
 Physically Active Lifestyles (No. 144, 1996)
 Career and Life Management (No. 145, 1996)
 Life/Work Transitions 10 (1999)
 Tourism 11 (1999)

Physical Education

- Foundation for Active, Healthy Living: Physical and Health Education Curriculum (1997)
- Physical Education Curriculum, Grades Primary-6 (1998)
- Physical Education Curriculum, Grades 7-9 (1999)
- Physical Education, Grades 7-12 (No. 90, 1985)

Science

- Foundation for the Atlantic Canada Science Curriculum (1998)
- Elementary Science Program, Curriculum Framework
- Science in the Junior High Schools (No. 98, 1987)
- Atlantic Provinces Biology 11, 12 (1996)
- Atlantic Provinces Chemistry 11, 12 (1996)
- Atlantic Canada Chemistry Curriculum, Chemistry 11 (Implementation Draft, June 1999)
- Atlantic Provinces Physics 11, 12 (1995)
- Atlantic Canada Physics Curriculum, Physics 11 (Implementation Draft, June 1999)
- Geology 241 (No. 9, 1977)
- Geology 441 (No. 38, 1978)
- Geology 12 (Draft, 1999)
- Integrated Science 10 (No. 136, 1993)
- Oceans 11 (1999)

Supplementary Documents

- Safety in the Chemistry Laboratory (No. 47, 1984)
- A Safety Manual for Science Laboratories and Classrooms (No. 48, 1984)
- Safety In-Service Bulletin (No. 49, 1984)
- Biohazardous Safety Manual
- Secondary Science: A Teaching Resource (1999)

Social Studies

- Social Studies for Elementary Grade Levels (No. 77, 1981)
- Grade 7 and Grade 8 Social Studies (draft guidelines)
- Atlantic Canada in the Global Community (Grade 9) (1998)
- Mi'kmaq Studies 10 (No. 169, 1998)
- History: Grades 10-12 (Draft)

- Grade 10 Ancient/Medieval History (draft guidelines)

- African Canadian Studies 11 (draft)
- Global History 12 (No. 132, 1993)
- Geography, Grades 10-12 (No. 39, 1979)
- Geography 10 (No. 143, 1996)
- Global Geography 12 (No. 131, 1993)
- Sociology 341 (No. 14, 1978)
- Economics 331, 441 (No. 15, 1978)
- Political Science 441 (No. 17, 1978)
- Law in High School (No. 10, 1978)
- Foundation for the Atlantic Canada Social Studies Curriculum (1999)

Student Services

Supplementary Documents

- Speech and Language Services: A Special Education Handbook (No. 38, 1983)
- Special Education Policy Manual (1996)
- Moving to Inclusion (1995) (Physical Education—should see authorized lists)
- Handbook for the Transportation of Students with Special Needs (1996)
- Challenge for Excellence: Enrichment and Gifted Education Resource Guide (1999)
- Teacher Assistant Guidelines (1998)
- Comprehensive Guidance and Counselling (Available Winter 1999)
- Administrators' ESL Resource Document (English as a Second Language) (1994)
- ESL Resource Document (English as a Second Language) for Teachers/Support Staff (1994)
- ESL Teaching Resource Kit (Elementary) TESL Nova Scotia and Department of Education and Culture (Revised 1994)
- Multicultural Education Resource Listing (Revised 1999)
- Community Resource Listing (Revised 1999)

Technology-Related Education

- Computer-Related Studies, CRS 11 and CRS 12 (No. 142, 1995)
- Vision for the Integration of Information Technologies within Nova Scotia Public School Program (available only on WWW and from Learning Resources and Technology)

**I.A. Technology, Junior High School Level
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NOTE: See also the Department of Education
Web site at <http://www.EDnet.ns.ca>